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VENTURE

Adventures Among The Moonshiners

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Camp Venture

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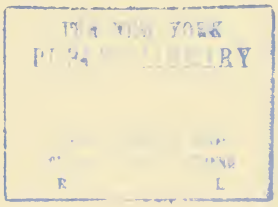

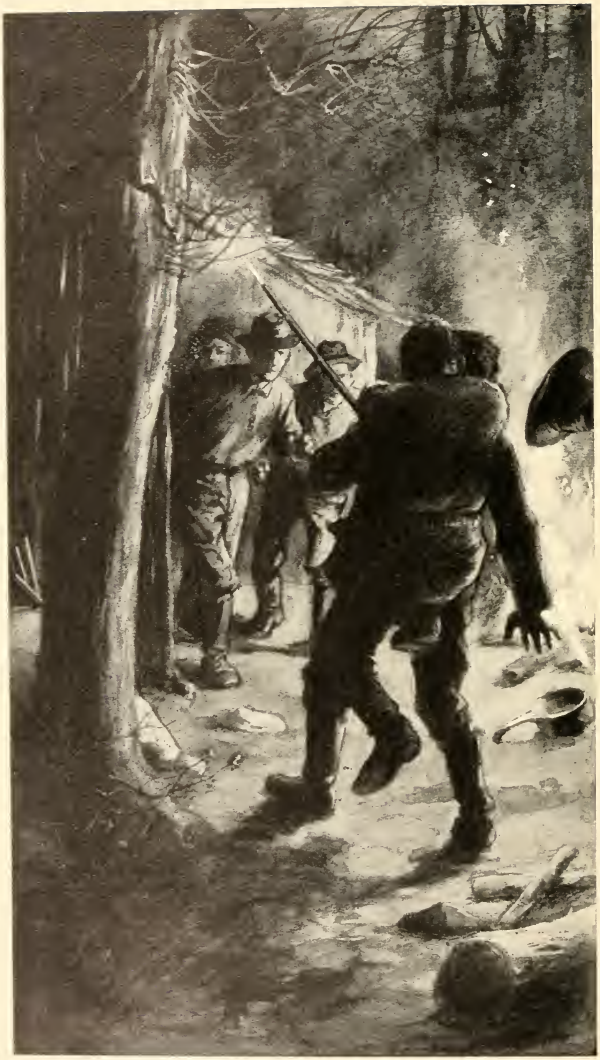

TOM LEAPED UPON THE MOUNTAINEER'S BACK.

(*See page 48.*)

CAMP VENTURE

A STORY *of* THE VIRGINIA MOUNTAINS

BY GEORGE CARY EGGLESTON

AUTHOR OF
"A CAROLINA CAVALIER,"
"THE LAST OF THE FLAT-BOATS," ETC., ETC.

ILLUSTRATED BY W. A. McCULLOUGH

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Camp Venture

Camp Venture

CHAPTER I

On the Mountain Side

"I'M tired, and the other pack mules are tired, and from the way you move I imagine that the rest of you donkeys are tired!" called out Jack Ridsdale, as the last of the mules and their drivers scrambled up the bank and gained a secure foothold on the little plateau.

"I move that we camp here for the night. All in favor say 'aye.' The motion's carried unanimously."

With that the tall boy threw off the pack that burdened his shoulders, set his gun up against a friendly tree and proceeded in other ways to relieve himself of the restraints under which he had toiled up the steep mountain side since early morning, with only now and then a minute's pause for breath.

"This is a good place to camp in," he presently added. "There's grazing for the mules, there's timber around for fire wood and I hear water trickling down from the cliff yonder. So 'Alabama,' which is Cherokee eloquence meaning 'here we rest.'"

The party consisted of five sturdy boys and a man, the Doctor, not nearly so stalwart in appearance, who seemed about twenty-eight or thirty years old. Each member of the party carried a heavy pack upon his back and each had a gun slung over his shoulder and an axe hanging by his girdle. There were four packmules heavily laden and manifestly weary with the long climb up the mountain.

As the boys were scarcely less weary than the mules they eagerly welcomed Jack Ridsdale's decision to go no farther that day, but rest where they were for the night.

"Now then," Jack resumed as soon as he got his breath again—a thing requiring some effort in the rarefied atmosphere of the high mountain peak—"we're all starved. The first thing to do is to get a fire started and get the kettle on for supper. If some of you fellows will unload the mules and get out the necessary things I'll chop some wood and we'll have a fire going in next to no time."

With that he swung his axe over his shoulder and stalked off into the nearby edge of the wood land. There with deft blows—for he was an expert with the axe—he quickly converted some fallen limbs and dead trees into a rude sort of fire wood which the other boys shouldered and carried to the glade where the Doctor had started a little fire that needed only feeding to become a great one.

During their laborious climb up the steep mountain side the party had found the early November day rather too warm for comfort; but now that the sun had sunk behind the mountain, and evening was drawing near, there was a sharp feeling of coming frost in the atmosphere, and as it would be necessary to sleep out of doors that night with no shelter but the stars, Jack continued his chopping until a great pile of dry wood lay near the fire ready for use during the night.

In the meantime the other boys busied themselves in getting supper ready. Harry Ridsdale—Jack's younger brother—prepared a great pot of coffee, while Ed. Parmly fried panful after panful of salt pork, and Jim Chenowith endeavored to boil some potatoes. "Little Tom" Ridsdale, another brother of Jack's, employed himself in bringing the wood as fast as his brother chopped it, and piling it near the fire. While these things were

doing the Doctor had carefully unpacked some of his scientific instruments and hung them up on trees at points, convenient for observation.

Presently Ed. Parmly called out: "Now fellows, supper's ready—at least the pork and the coffee are waiting for Jim Chenowith to dish up his potatoes. Come Jim, what's the matter? Are you trying to boil those potatoes into mush?"

"No," answered Jim, jabbing the tubers with a stick which he had sharpened for that purpose, "but somehow the potatoes don't seem to want to get done. Mother always boils them in from ten to twenty minutes, according to their size, and these are about the ten minute size, yet I've boiled them for full half an hour and they're only now beginning to get soft."

"Your mother's potato kettle," said the Doctor, "isn't boiled at an elevation of two thousand feet above the sea level and that," consulting his aneroid barometer, "is about our present altitude."

"How do you find out that?"

"What has height to do with boiling potatoes?"

These questions were fired at the Doctor instantly.

"One at a time please," said the Doctor, "and as I see Jim is at last dishing up his potatoes

we'll postpone the answer to both questions, if you don't mind, till we have satisfied our appetites."

The hungry fellows were ready enough to give exclusive attention to the business in hand, and as they sat there on logs and other improvised seats with tin plates before them and tin cups at hand they were a picturesque and attractive group, such as an artist would have rejoiced to portray.

As is usual with boys in the mountain regions of Southern Virginia, they were very tall—the older ones nearing, and Jack exceeding, six feet in height, while even "Little Tom" stood five feet seven in his socks with a year or two of growth still ahead of him. They were all robust fellows, too, lean, muscular, thin visaged, clear eyed and bronzed of face. They wore high boots, into which the legs of their trousers were thrust, and, over their trousers, thick woollen hunting shirts, the whole crowned with soft felt hats. It was precisely the dress which Washington urged upon Congress as the best service uniform that could be devised for the use of the American army.

"Now then Doctor," said Jim Chenowith, pushing away his tin plate and swallowing the last of the coffee from his big tin cup, "tell us why the potatoes wouldn't cook."

"Simply because the water wasn't hot enough to cook them as quickly as usual."

"Not hot enough? Why it was boiling like a volcano every moment of the time," said Jim in protest.

"Yes, but the boiling of water doesn't always mean the same thing. You see at or near the sea level water boils at a temperature of 212 degrees, Fahrenheit. But when you climb up mountains you come into a rarer and lighter atmosphere and water boils at considerably lower temperatures."

"But I kept my potato kettle boiling very hard—" interrupted Jim; "I never stopped firing up under it."

"That made no difference whatever in the amount of heat in it," answered the Doctor. "When water boils at all it is just as hot as fire can make it, unless it is shut completely off from contact with the air, as is the case in steamboilers. You can't make it any hotter no matter how much you may 'fire up' under the kettle."

"Why, how's that?" asked "Little Tom," becoming interested. "The more fire you make in a stove the hotter the stove gets, and the hotter the room gets, too. Why isn't it the same way with a kettle of water?"

"I'll explain that," said the Doctor, "and I

think I can make you understand it. When water boils it gives off the vapor which we commonly call steam. That is to say, some of the water is converted by heat into vapor. It requires a great deal of heat to make the change from liquid to vapor and so the process of giving off steam cools the water. That is why you put a lid on a pot that you wish to boil quickly. You do it to check the cooling process by confining the vapor and preventing a too rapid conversion of water into steam."

"Is that the reason that you can hold your hand in the steam from a kettle when you can't hold it in the water that the steam comes from," asked Jim.

"Yes. The steam is really hotter than the water, but it needs all its own heat to keep it in the form of vapor, and so it doesn't give off enough heat to burn your hand after it gets a little way from the pot and begins to expand freely. Now as I was saying the harder you boil water the more steam it gives off and the heating and cooling processes are so exactly balanced that boiling water stands always at a uniform temperature no matter whether it is boiling hard as we say, or only just barely boiling. But in a dense atmosphere it requires more heat to boil water than it does in a rarefied atmosphere like

that up here on the mountain. At Leadville and other places lying from 10,000 to 14,000 feet above sea level in the Rocky mountains you can't boil potatoes at all and it takes full ten minutes to boil an egg into that condition which we call 'soft.' It all depends upon the temperature of boiling water, and that is considerably lower here than down in the valleys where we live."

"But Doctor," said Harry, "you promised to tell us how you find out how high we are above the sea level."

The doctor got up, went to a tree and took down a scientific instrument.

"This," he said, "is an aneroid barometer. It measures the atmospheric pressure, and as that pressure steadily and pretty uniformly decreases as we go higher up, the instrument tells us at once how high we are."

"But will it measure so accurately that you can trust it?" asked one of the now eagerly interested boys.

"Let me show you," said the doctor. "Make a torch, for it is growing dark, and come with me down the hill a little way. First look where the needle stands now."

They all carefully observed the register and then proceeded with their mentor down the hill a little way. He there exhibited his instrument

again and it registered fifty feet lower than it had done on the plateau above. Returning to the camp fire they found that the needle had resumed its former pointing.

"Then you can tell by that instrument exactly how high you are at any time?" queried Jack.

"No, not exactly. You see the atmospheric pressure varies somewhat with the weather even if you observe it always on the same level. One has to allow for that, but allowing for it we can tell by the instrument what our elevation is with something closely approaching accuracy."

Just then came an interruption. A tall rough bearded, unkempt mountaineer, rifle in hand, stalked out of the woods and approached the camp fire. After inspecting the company and their belongings in silence for a time, he spoke a single word of question—"Huntin'?"

"No," answered Jack, who had risen in all his length of limb.

"Trappin'?"

"No."

"Jest campin' out?"

"No," answered Jack, still adhering to that monosyllable.

"Mout I ax then, what ye're a doin' of up here in the high mountings? You see us fellers

what lives up here aint over fond of strangers that comes potterin' round without explainin' of their selves."

"Well" said Jack, "I don't see why I shouldn't tell you what brings us here. My mother owns a tract of timber land a little further around the mountain, and it is pretty much all she does own in the world. She's a widow, and she's had a pretty hard time to bring up three boys of us"—turning and indicating his two brothers—"and now we see a way of helping her. They're going to build a railroad down in the valley on the other side of this mountain, and they want railroad ties. So we have organized a party and come up here to chop down trees, make ties and send them down the mountain by a chute."

"Um," answered the mountaineer. "What's them there things for?" pointing to the Doctor's scientific instruments hanging about on the trees.

"They are scientific instruments, if you know what that means," answered Jack, who was beginning to grow irritable under the intruder's impertinent questioning.

"What are you goin' to do with 'em? Will they help you to chop wood?"

"No, of course not. But the Doctor here," indicating him, "is much interested in science and

he has brought his instruments along so as to make our stay on the mountains as profitable as possible in the way of study."

"My friend," broke in the Doctor, addressing the mountaineer, "If you will come to our camp when we get settled I'll show you how I use these things and what they tell me. One of them tells me how high up we are and when it's going to storm or clear away; another shows how fast the wind is blowing, another how cold it is and so on."

"Which one on 'em tells the strength of whiskey and how much tax they ought to be paid on it?"

This question was asked with a peculiar tone of sneering incredulity and suspicion.

"Not one of them has any relation whatever to whiskey or taxes or anything of the sort," answered the Doctor.

By this time Jack's patience was exhausted and by common consent Jack was the leader of the party. He turned to the tree behind him, seized his shot gun, presented it at the mountaineer's breast before that worthy could bring his rifle to his shoulder, and in an angry, but still cold voice, said:

"I'll trouble you to lay down that rifle."

The man obeyed.

"Now I'll trouble you, if you please to lay down your powder horn and your bullet pouch and your cap box and everything else that pertains to that rifle." All this while Jack was holding the muzzle of his full-cocked, double barrelled shot gun in front of the man's breast, while all the other boys had seized their guns and stood ready for action. The Doctor had not a shot gun, but a repeating, magazine rifle of the latest make, long in its range, exceedingly accurate in its fire and equipped with fourteen cartridges in its magazine that could be fired as fast as their owner pleased. And the moment that the mountaineer, before he laid down his rifle, made a motion as if to bring it to his shoulder, the Doctor had stepped to Jack's side with his destructive weapon in position for instant use. After the man had laid down his arms, the Doctor stepped back, lowered his weapon and said to Jack:—"Manage the affair in your own way. Only be prudent, and above all don't lose your temper."

Jack then said to the mountaineer:

"You've asked us a number of questions. Now I want to ask you some. What do you mean by intruding upon our camp? Who are you? What right have you to ask us about ourselves and our mission in these mountains? Answer man, and

answer quick or I'll put two charges of buck shot through you in less than half a minute."

"Now, don't be too hard on a feller, pard," answered the man. "I didn't mean no harm in partic'lar. But you see us fellers that lives up here in the high mountings has a hard enough time to git a livin' and we don't like to be interfered with by no revenue officers and no spies and no speculators from down below. You see if we're caught, some of the money goes to the informer, an' so we takes good keer to have no informers about, an' if they insist on stayin' we usually buries 'em. Now you've got the drap on me an' my only chance is to go way if you'll let me go. So far as I'm concerned you're welcome to go round the mounting an' chop all the railroad ties an' cordwood you choose. But there's fellers in the mountings that you ain't got no drap on, as you've got it on me, an' fellers what ain't so tender hearted as me. An' so, while I'll leave my gun an' promise never to meddle with you again if you won't shoot, at the same time my earnest, friendly, fatherly advice to you boys is to take yourselves down out'n this mounting jes' as quick as you kin. It ain't no place for people of your sort."

"We'll do nothing of the kind," answered Jack. "We've come up here on a perfectly honest and legitimate mission, and we're going to

carry it out. We are not interfering with anybody and I give you warning that if anybody interferes with us it will be the worse for him. We are armed, every man of us and we are prepared to use our arms. Tom,"—turning to his brother, —" take that man's rifle and discharge it into the cliff back there."

Tom obeyed the command instantly. Then Jack said to their unwelcome visitor, " Now you can take your rifle and go away. But don't intrude upon us again. If you do, you'll get the contents of our guns without any explanations or any arguments. Take your gun and go!"

The intruder took his gun and accoutrements and without a word walked away up the mountain through the timber land.

" What does it all mean, Jack?" asked all the boys at once.

" Moonshiners," broke in Tom, sententiously.

Moonshiners are men who operate little unlicensed distilleries in the fastnesses of the mountains and surreptitiously sell their whiskey without paying the government tax upon it.

" But why should moonshiners object to our camping in the wood lands up here and cutting railroad ties?" asked Jim Chenowith. " I don't see the connection."

" Well, they do," answered Tom. " They are

engaged in a criminal business and they don't want to be watched. If they are caught their stills and their whiskey are confiscated, they are fined heavily, and worse still they are imprisoned for very long terms. They are always on the look-out for agents of the revenue in disguise, and so they don't want any strangers in this 'land of the sky' on any pretence. They are desperate men to whom murder is a pastime and assassination an amusement."

"Then why did you anger the man as you did, Jack, and subject him to humiliation?" asked Ed. Parmly. "Won't it make him and his people our enemies?"

"No," answered Jack. "They are that already. You remember that even after hearing my explanation of our purpose in coming up here, he ordered us to leave the mountain at once. Not being a pack of cowards of course we're not going to do anything of the kind. So it was just as well to let him know at once that we're going to stay, that we are fully armed, and that in the event of necessity we shall be what he would call 'quick on trigger.' I meant him to understand that clearly, and he understands it. You see men that are freest in killing other men have no more fondness than people generally for being killed themselves. Desperadoes are not heroes. They

are merely bullies who take advantage of an unarmed enemy when they can and sneak away as that man did whenever an enemy 'gits the drap' on them as the fellow phrased it."

"But won't they attack us in our camp?" asked Jim Chenowith.

"Probably," answered Jack with perfect calmness. "They want us out of the mountains and they'll probably try to drive us out. But I for one am not going to be driven out, and I don't think the rest of you fellows are Molly Cottontails to be chased down the steeps."

"No!" called out little Tom. "We've got guns and we know how to use them. We're up here by right and here we'll stay. Won't we boys?"

"Yes! Yes! Yes!" answered the others in chorus.

"All right then," said Jack, "and I thank you all. But now that we know our danger we must look out for ourselves. We must never sleep without a sentinel on guard, and every fellow of us must always sleep with his gun by his side. That's what soldiers call 'sleeping on arms!'"

"All right!" called out Tom, who was always ready. "Arrange the guard detail for tonight Jack. I'll take the worst turn, which I be-

lieve begins about three o'clock—the ' dog watch ' they call it on steamboats."

" Well," said Jack, meditatively. " It's now nearly ten o'clock. We'll all be up by six in the morning. That's eight hours and there are five of us; so it means one hour and thirty-six minutes apiece, of guard duty."

" Hold on," broke in the Doctor. " You've forgotten me."

" Well you see, Doctor, your health isn't good, and we don't want you to lose your sleep. We'll do all this guard duty without bothering you."

" Not if I know it," answered the Doctor. " I didn't join this party as a dead head, you may be sure of that. I'm going to share and share alike with you my comrades. I am not yet very strong after my long illness, but I'm strong enough to stay awake for my fair share of the time, and you may be sure I am strong enough to pull a trigger and empty fourteen bullets from my magazine rifle into any body that may venture to assail us. Now boys, I want you to understand my position and attitude clearly. Either I am a full member of this company in good standing, or else I do not belong to it at all. In the latter case I'll withdraw and go back down the mountain. I'm older than you boys, but not enough

older to make any serious difference. I'm still a good deal of a boy, and either you must let me do a boy's part or I'll quit. If I stay with you I must be one of you. I must do my share of the cooking and all the rest of the work, and especially my fair share of all guard duty and all fighting, if fighting becomes necessary at any time. Come now! Is it a bargain? Or am I to quit your company to-morrow morning, as a man too old and unfit to share with you the work we have come up the mountain to do?"

"I move," said little Tom, who had more wit than any other member of the company, "that Doctor LaTrobe be hereby declared to be precisely sixteen years old, and fully entitled to consider himself a boy among boys!"

The motion was carried with a shout, and then Jack, who was always practical, said:

"Well then there are six of us. That means one hour and twenty minutes apiece of guard duty to-night."

So it was arranged, and as soon as the order in which the several members of the party should be waked for duty was arranged, the boys piled an abundance of wood on the fire, wrapped themselves in their blankets and lay down to sleep. But first little Tom manufactured a pot of fresh

coffee, and set it near the fire where it would keep hot.

"The sentinel must be wide awake," he said, "and I don't know anything like good strong coffee to keep one's eyes open."

CHAPTER II

A Picket Shot

THE three Ridsdale boys and their comrades lived in a thriving, bustling little town in one of the great valleys which divide the Virginia Mountains into ranges each having its own name. Their ages ranged from Jack's nineteen years down to Jim Chenowith's sixteen. Little Tom was so called not so much because he was rather shorter than his overgrown brothers, as because his father had been also Thomas Ridsdale and for the sake of distinguishing between them the family and the neighbors had from his infancy called the boy "Little Tom." He was next to Jack in age being now nearly eighteen years old, and as a voracious reader and a singularly keen observer he was perhaps better informed than any other boy in the party. He was not really little by any means, being five feet seven inches high and of unusually stalwart frame. From his tenth year till now he had spent his vacations mainly in hunting in these

mountains. His knowledge of wood craft and of all that pertains to the chase was therefore superior even to Jack's.

The father of the Ridsdale boys had been the foremost young lawyer in the town, but he had died at a comparatively early age, leaving his widow a very scanty estate with which to bring up the three boys who were her treasures. The boys had helped from the earliest years in which they were capable of helping. They had chopped and sawed and split wood, worked in the hay fields, dropped and covered corn, pulled fodder and done what ever else there was to do that might bring a little wage to eke out the good mother's scant income. In brief they had behaved like the brave, manly, mother-loving fellows that they were, and they had grown into a sturdy strength that promised stalwart manhood to all of them.

Among the widow's meagre possessions was a vast tract of almost worthless timber land up there on the mountain. It was almost worthless simply because there was no market for the timber that grew upon it. But now had come the railroad enterprise, whose contractors wanted ties and bridge timbers and unlimited cordwood for use in their engine furnaces. So Jack and his brothers had decided to omit this winter's attendance upon the

High school, and to devote the season to the profitable work of wood chopping on the mountain. There was an exceedingly steep descent on that side of the mountain, on which their timber lands lay, so that by building a short chute to give a headway they could send their railroad ties and the other products of their chopping by a steep slide to the valley below by force of gravity and without any hauling whatever. Two of their schoolmates—Jim Chenowith and Ed. Parmly had asked to join in the expedition. An arrangement had been made with the railroad people to pay a stipulated price for every railroad tie shot down the hill, a much higher price for every piece of timber big enough for use in bridge building and a fair price for all the cordwood sent down the chute. This latter was to be made of the limbs of trees cut down for ties or bridge timbers—limbs not large enough for other uses, and which must otherwise go to waste. The two boys who did not belong to the Ridsdale family—Ed. Parmly and Jim Chenowith—were to pay to Mrs. Ridsdale a small price agreed upon for each tie or timber, or cord of wood that they should cut on her land, the rest of the price going to themselves.

During the last week before their departure Dr. LaTrobe had asked the privilege of joining the

expedition. He was a man of means whose home was in Baltimore, but who had come to the town in which the boys lived in search of health and strength. He was a tireless student of science, and in the course of his duty in one of the charity hospitals of Baltimore he had contracted a fever. His recovery from it was so slow and unsatisfactory that he had abandoned his work and wandered away into South Western Virginia for purposes of recuperation and had been for some months boarding with Mrs. Ridsdale. In pursuit of health and strength therefore he asked to join the Ridsdale boys in their mountain expedition.

"I have quite all the money I want," he explained, "and so the ties and timbers and cordwood that I may cut will be counted as your own. All I want is the life in the open air, the exercise, the freedom, the health-giving experience of a camping trip."

Thus it was that the party had come together. They knew perfectly that once in the mountains after winter should set in in earnest their communication with the country below must be very uncertain. They therefore, took with them on their own backs and on the backs of their pack mules those necessaries which would most certainly render them independent of other sources of

supply. The Doctor had largely directed the selection of food stuffs, bringing to bear upon it an expert knowledge which the boys, of course, did not possess.

"The basis will be beans," he said.

"But why beans?" asked Jack.

"For several reasons. First, because beans will keep all winter. Second, because beans are very nearly perfect food for robust people. They have fat in them, and that makes heat, and they have starch and gluten in them too, so that they are in fact both meat and bread. Pound for pound, dried beans are about the most perfect food possible. To make them palatable we must take some dry salted pork along. We can carry that better than pickled pork in kegs and we shall not have to carry a lot of useless brine if we take the dry salted meat."

The Doctor added some dried beef, a few hams, some bacon and a supply of sugar.

"Sugar," he explained, "is almost pure nutriment. It is food so concentrated that it ought never to be taken in large quantities in its pure state."

"That's why they were so stingy with me in the matter of candy when I was a little chap," soliloquized Tom.

The total supply of meat taken along was small,

but it was quite well understood that the party must rely upon its guns mainly for that part of its food supply.

For bread there was a small quantity of "hard tack" and a large supply of corn meal.

The salt was securely encased in a water-tight and even moisture-proof oil-cloth bag. One big cheese was taken by special request of Ed.'s mother, who had made it a year before, and the Doctor approved its inclusion in the list.

"It weighs fifty pounds" he said to Jack who from the first had charge of the expedition, "but it is pure food and we couldn't put in fifty pounds of any thing else that would go so far to ward off starvation in case we get into difficulties. Next to a supply of coffee, nothing could be more useful."

There were only four pack mules to carry these things, but every member of the party carried a heavy pack on his shoulders, besides his gun and axe, so that altogether the expedition was reasonably well provisioned, in view of the fact that it was going into the mountains where game of every kind abounded.

No provender was carried for the pack mules. There was grass enough for them to live upon during the journey of two days and at the end of that time they were to be turned loose to find

their own way down the mountain, cropping grass and herbs as they went.

There was a grind stone for the sharpening of the axes, and one of the boys carried a long cross-cut saw. The ammunition supply was large, and besides cartridges loaded with turkey shot it included several scores that carried full sized buck shot. The ammunition, added to the rest, very seriously overloaded the mules. On a long journey those animals, large and brawny as they were, could not have endured the burdens laid upon them. But the trip up the mountain was to occupy a good deal less than two days and so the owner of the mules readily consented to the overloading.

That is how it came about that the five boys and Doctor LaTrobe were camping up there in a little mountain glade, on the night on which our story opens. They had less than a mile to go on the next day in order to reach their permanent camping place, but the journey was mainly a very steep up-hill one, and, their halt on the mountain side was in every way wise.

Healthily weary as they were it did not take the boys long to fall asleep after they had wrapped themselves in their blankets and lain down with feet toward the great blazing fire.

It was understood that the one on sentry duty should replenish the fire from time to time, but

at Jack's wise suggestion the sentry was himself to remain well away from the blazing logs, and in the shadow of the woodlands beyond.

"Otherwise," explained Jack, "an enemy approaching in the dark might easily pick off our sentry, sitting or standing in the firelight, and then slip away in the darkness without the possibility of our seeing him."

The hours wore away, however, with no disturbance in the camp. One after another sentry aroused his successor and himself lay down to sleep.

It was nearing daybreak, and little Tom was on duty. There was already a rime of white frost on the grass and leaves and the atmosphere was chill. Tom looked longingly at the great blazing fire as he walked his beat in the woodland shadows far beyond reach of its comforting radiance.

"Any how this snappy air keeps a fellow from sleeping on post," he said to himself, "and they punish that crime with death in the army. Whew! how my ears ache!

"What's that?" he ejaculated under his breath as he heard a stealthy noise. Listening he heard a sound as of some one creeping up through the woods. He cocked both barrels of his shot gun, each of which carried nine buck shot, and

breathlessly waited, listening and looking. Presently he fired, and instantly every member of the party was on his feet, gun in hand, for they were all sleeping with their pieces beside them.

"What is it?"

"Where is it?"

"Who is it?" and so on with question after question they bombarded little Tom.

"It's breakfast" said little Tom, calmly walking to the foot of a tree and there picking up a fat opossum.

There was a laugh, for half asleep as the boys were they saw the humor of the situation and realized under what a nervous strain they had been sleeping.

"Now go to sleep again," said Tom, "and when I wake you next time breakfast will be ready."

He went away into the woods and there dressed the opossum. Then he so far disregarded orders as to go to the fire and rig up a device for cooking the dainty animal. He cut two forked sticks, sharpened their lower ends and drove them firmly into the earth. Across these he laid another stick and from it he hung the opossum by a bit of twine which he twisted till it set and kept the roast revolving. Then he returned to the shadows, but every now and then he came back to the fire to

inspect his roast and to set the string twirling anew.

Finally, just as day was breaking, little Tom aroused the rest with a demand that some of them should make some bread, brew some coffee and " make themselves generally useful," as he phrased it.

The sun was not yet up when the last bones of the pig-like little animal were picked clean and the final drop of coffee was drunk.

CHAPTER III

The Doctor's Plans

THE little company had only a mile, or a trifle more, to go before reaching their final destination. But it was literally "up hill work." Often it was worse even than that, involving the climbing of cliffs and difficult struggles to force the mules through rocky and tangled woodlands.

It was nearly ten o'clock therefore when they at last came to a halt in a body of thick-growing timber, and after a careful inspection of the situation, decided to pitch their permanent camp there.

There were many points to be considered in locating themselves. They must have water of course and there was a spring here under the cliff that rose at the back of the plateau. It needed some digging out to form a basin, but an hour's or two hours' work by two of the party would accomplish that. They must be near the cliff on the other side over which their ties and timbers were to be sent into the slide that was to carry

them to the valley below, and this spot seemed the best of all for the purpose. Finally the timber, consisting chiefly of vigorous young oaks, hickories and chestnuts, but having many giant trees besides, was here especially dense in its growth, and ready to their hands and axes.

"There's a steep reach of mountain looming up just behind us," said the Doctor, "and when the snows come it may give us some trouble in the way of avalanches, floods and the like, but on the whole I think this is the best spot we could select."

So the pack mules were relieved of their loads, and turned loose. It was certain that the sagacious animals would slowly retrace the road over which they had come and return to their master in the valley below. At any rate the master of them was confident of that and his agreement with the boys had been that the mules should simply be turned loose when their task was done.

"Now let's all get together," said Jack Ridsdale when the mules disappeared over the edge of the last troublesome ascent. "Let's all get together and lay out our work."

"That's right," said the Doctor. "We must first of all provide for immediate needs, and next for a permanent camp. Now first, what are our immediate needs?"

"Water, fire, and a temporary shelter," promptly answered little Tom the readiest thinker as well as the most experienced woodsman in the whole company.

"Well we'll set two fellows at work digging out a large basin for that spring," said Jack. "That will give us an adequate water supply for all winter. You Tom, and Ed. Parmly, are detailed to that work. Now as to shelter. Of course we've got to build a permanent winter quarters. But that will take several days—perhaps a week, and in the meantime we're likely to have snows or rains and we must have some sort of temporary abode. We must build that to-day. How shall it be done?"

"Easy enough," answered Harry Ridsdale. "We can set up some poles just under the cliff back there and make a shed open in front and covered with bushes so arranged as to shed the rain. Of course the place wouldn't be a good one for permanent quarters, but in November there are no avalanches or anything else of that sort, and so a temporary shed there will answer our purpose for the present."

"But how are we going to keep it warm?" asked Ed.

"By building a big fire in front of it," answered Harry.

"But suppose the wind should blow hard from the north and blow all the smoke into our shed?" said Ed.

"Well, let it," answered Harry. "The smoke will rise, especially in a high wind, and our bush roof will certainly be porous enough to let it through."

After a little further discussion it was decided to adopt Harry's plan, and by the time that Tom and Ed. had completed the work of digging out a water reservoir, the rest of the party had constructed a temporary shelter under the cliff, quite sufficient for their immediate needs. By this time hunger—that always recurring condition—had seized upon them and they prepared a rather late dinner of squirrels that had been shot by one and another of the party on the journey. They were tired, too, and the need of rest was imperative. So they decided to do no more work that day, but to devote its remaining hours to the task of planning their winter quarters.

First of all they selected a location for their winter house which the Doctor thought the avalanches and the floods from the mountains would not seriously inconvenience. The ground on which they were camping was a sort of plateau, with a cliff rising behind and with the steep mountain side falling away into the fathomless depths in

front. The plateau embraced several acres of land, and it was fairly level; but the spot selected for winter quarters was a little knoll which rose above the general level very near the top of the steep front.

By the time that all this had been accomplished night fell, and there was supper to get. After supper Jack said:

"Now we've laid out our camp, but we haven't named it yet. With the enmity of the moonshiners already aroused, it's a venture—our staying here I mean—but we're going to make the venture. So I propose that we call this camp of ours 'Camp Danger,' or 'Camp Risk' or camp something else of the sort."

"Why not call it 'Camp Venture?'" asked Harry.

"Good! 'Camp Venture' it is," answered Ed. Parmly and the Doctor in unison. "Let it be 'Camp Venture'" and, added the Doctor, "if we are up to our business we'll show our friends that 'Camp Venture' did not venture more than its members were able to carry out. I'll tell you what, boys, I'm going to keep a diary setting forth all our adventures, and when the thing is over and done for, I'm going to write a book about it."

"Then we'll all be heroes of romance," said Jack. "Who'll be the villain of the piece?"

"Not at all," answered the Doctor. "I shall use fictitious names for all of you and even for myself, so that nobody shall ever know who we are or who it was that lived and experienced and perhaps suffered in 'Camp Venture.' I'm not going to spoil you superb fellows by making public personages of you before your time. But I'm going to write a book about your doings and sayings, which will perhaps interest some other boys and help them to meet duty as it ought to be met."

This story is the book that the Doctor wrote.

CHAPTER IV

A New Declaration of Independence

"WELL," said little Tom long before supper, "if you fellows are too lazy to do any more work after an easy day like this, I am going out into the sunset to look for a turkey. I'm not fond of salt meat, and besides we've got to spare our salt pork against a time of need. I'll be back by supper time."

With that he shouldered his gun, withdrew one of the buckshot cartridges, inserted one loaded for turkeys in its stead, and strolled away up the mountain side.

An hour passed and little Tom did not return. Another hour went by and still no little Tom came. By this time darkness had set in and supper was ready. The boys were growing uneasy, but they comforted themselves with the thought that "Little Tom knows how to take care of himself, anyhow."

So they sat down to their evening meal with a

great fire crackling and glowing in front of their temporary shelter, and filling it with fierce light which completely blinded their eyes to everything in the gloom beyond. They had carelessly stacked their arms in a corner, a dozen feet beyond reach, and were chatting in a jolly way when suddenly there appeared before them the tall mountaineer of the night before.

This time he was wilier than on his previous appearance. This time he levelled his gun at the party and quickly stepped between them and their arms. Then, with his rifle at his shoulder and his finger near the hair trigger that was set to go off at the very lightest touch, he called out:

"You got the drap on me las' night, but now I've dun got the drap on you. Will you now git out'n this here mounting? I've dun give you notice that us fellers what lives up here don't want no visitors from down below. So throw up your hands and march right now, every one of you. I'll take keer o' your guns an' other things, an' I'm not a goin' to take this rifle from my shoulder till the last one of you is well started down the mounting. Come now! Git a move onto you!"

At that moment a noise as of some heavy body falling was heard in the outer darkness just beyond the limits of the firelight. The next in-

stant little Tom leaped upon the mountaineer's back grasped his throat with both hands and dragged him to earth. His rifle went off in the melee, but fortunately the bullet had no billet and flattened itself against the side of the cliff.

Of course the mountaineer was more than a match for little Tom and in a prolonged struggle would easily have got the better of him. But the other boys instantly came to their comrade's assistance and the intruder was quickly and completely overcome.

He had received some ugly hurts in the encounter, among them a broken arm, but the Doctor dressed the wounds and meantime the man became placative in his mood.

"I was about to shoot him," said little Tom, "but it isn't a pleasant thing to shoot a man even when you must, and so I thought of the other plan, and jumped on his back instead. I knew I couldn't hold him down by myself, but I knew you other fellows would come to my assistance, so I risked that mode of operations."

"If you had shot him," said the Doctor, "you'd have been justified both in law and in morals."

"Yes, I know that," said little Tom, "but I shouldn't have slept well afterwards and I'm fond of my sleep."

"Well now eat your supper," said the Doctor,

" and perhaps our friend the enemy here will join you in enjoying it."

To the astonishment of all, the mountaineer eagerly replied:

" Well, I don't keer if I do. I ain't et nothin' sence a very early breakfast, an' it wa'n't much of anything that I et then. As for the little scrimmage, I don't bear no malice when I gits hurt in a fair fight—least of all against a young chap like that. You see I had got the drap on you fellers, an' when he come up sort o' unexpected like and unbeknownst to me, he jist naterally took the drap on me. It was all fair an' right, an' I want to say I'm grateful to him for not usin' his gun. He could 'a shot me like a dog, an' he didn't."

All this while the lean and hungry mountaineer was eating voraciously and in spite of his wounds with an eager relish.

" How do you people live up here? " asked the Doctor. " You can't grow much in the way of crops. Do you generally have enough to eat? "

" Well hardly to say generally. Sometimes we has, and more oftener we hasn't. You see our business is onsartain. That's why we don't like strangers prowlin' around in the mountings. Now I've got somethin' friendly like, to say to you fellers. Fust off I want to tell you *I'm* not agoin' to bother you agin. I'm a believin' that you've

come up here on a straight business. But there's others that aint got so much faith as me. They'll make trouble for you if you stay. My advice to you is to git out'n the mountings jest as quick as you kin."

"But my friend," said the Doctor, "Why should we leave the mountains? We are on land owned by the mother of my young friends here. We have come only to see if we can't get some money for her out of lands that have never paid her anything—not even earning the taxes that she has paid on them. Why shouldn't we stay here and do this? This is a free country, and—"

"They's taxes in it," said the mountaineer, gritting his teeth, "an' they's jails for them that tries to carry on business without a payin' of the taxes. I don't call that no free country."

"It would be idle to argue that question," replied the Doctor. "But we, at least, have nothing to do with the taxes. We are here to make a little money in a perfectly legitimate way, by hard work. We are not interfering with any body and we don't intend to interfere with any body. But we're going to stay here all winter and carry on our business."

"Yes!" added Jack, "and if any body interferes with us it will be the worse for him."

"Well, you're makin' of a mistake," said the

mountaineer, "an' I give you friendly warnin'. As I done told you before, I believe you. I think you're dead straight. But there's them what ain't so charitable, as the preachers say. There's them that'll believe you're lyin,' and 'll stick to that there belief till the cows come home, an' they'll make a mighty heap o' trouble fer you fellers ef you tries to stay here. They're men that won't be watched I tell you, and forty witnesses, all on their Bible oaths couldn't persuade 'em but what you're here to watch 'em. It's friendly advice I give you when I tells you to git out'n these mountings."

"All right," broke in little Tom, "but while you're scattering friendly advice around suppose you advise your friends to let us alone. Tell them that little Tom Ridsdale proposes to shoot next time, and to shoot his buskshot barrel at that." Tom rose to his feet and added:

"You and your people mean war. Very well. I for one, accept the issue. Hereafter it will be war, and in war every man shoots to do all the damage he can. I have a perfect right to be here on my mother's land, and here I am going to stay. If every other fellow in the party should start down the mountain this night, I would stay here alone to fight it out all winter. And every other fellow in our party feels just as I do. Go to your

criminal friends and tell them that! But warn them that if they interfere with us we'll not wrestle with them, we'll shoot and we'll take no chance of missing. We'll shoot to produce effects. We'll never interfere with you or your friends, but you and your friends mustn't interfere with us. If you do, you'll get war and all you want of it. We've tried to do the right thing by you; and now I give you fair warning."

"Well, all I've got to say," said the mountaineer, as he took his departure, "is jest this: You fellers has dealt fair with me, an' I'll deal fair with you. That boy that threw me down an' broke my arm mout just as easy have shot me through the body; an' then the tender way that the Doctor done up my arm! Why even a woman couldn't 'a' been tenderer like. Now I ain't got no quarrel with you fellers, an' that's why I'm advisin' you to git down out'n the mountings as soon as you kin. There's others, I tell you, an' they ain't soft hearted like me. They'll give you a heap o' trouble if you stay here."

"Let them try it," answered little Tom.. "Let them try it. Then we'll see who's who, and what's what. Now tell your friends what I've said to you. There! good night! I hope your arm will get well. If it doesn't, come over here and let the Doctor look at it."

With that defiant farewell in his ears the mountaineer took his leave.

"Was it prudent, Tom?" asked Ed. Parmly, "to send that sort of defiant message to the moonshiners?"

"Yes, quite prudent. We want them to know that we are here on our own business and not on theirs, at all. We want them to know that we propose to stay here whether they want us to do so or not. And finally, we want them to understand that any interference with us on their part, will mean war. I've simply issued a Declaration of Independence, and—"

"And to it," called out Jim Chenowith, quoting, "we pledge our lives, our fortunes and our sacred honor."

"Now," said Jack, "from this hour forward we'll keep a sentinel always on duty, so that we may not be caught napping. During the daytime, of course, when we're chopping ties and timbers, we'll need no sentinels. We'll keep our guns within easy reach, and so every one of us will be a sentinel, but when night comes on we mustn't let anybody 'get the drap' on us as that fellow did to-night. By the way, Tom, did you get any game?"

"Why, yes. I forgot all about that. I dropped it out there to tackle that mountaineer.

I had carried and dragged it for weary miles, and I wonder at my forgetfulness."

Without questioning him further two of the boys went off into that circle of darkness which seemed impenetrably black when looked at from the fireside, but which was light enough when they got within its environment. There they found a deer, weighing perhaps a hundred and fifty pounds, which little Tom had shot high up on the mountain and had laboriously dragged, in part, and carried on his shoulders in other part, all the way to camp.

Tom was much too weary to attend to it, but there were eager hands to help, and while Tom slept, they dressed the venison, and when Tom waked in the morning, he found that he had been completely excused from sentry duty throughout the night. His toilsome hunt, his painful carrying of the deer, his nervous strain over the necessity of encountering the mountaineer, and pretty seriously injuring him, and above all, his rise in wrath and his deliverance of a new Declaration of Independence as a defiance to the mountaineers, had been decreed by unanimous vote of the party to be the full equivalent of sentry service, and so Tom had been permitted to sleep through all the hours till breakfast was served.

CHAPTER V

The Building of a Cabin

JACK routed out the entire party before daylight next morning and bade them "get breakfast quick and eat it in a hurry. We've got to begin our house to-day," he added.

They were eager enough, for, apart from the frolic of house building, they knew how badly they should need a more secure shelter than their temporary abode could furnish, should rain or snow come, as was likely now at any time.

Breakfast over, Jack took his axe and marked a number of trees for cutting. Most of them were trees nearly a foot in thickness—none under eight inches—and all were situated in the thickest growth of timber.

"Why not choose trees farther out in the open?" asked Ed. Parmly, "where they would be easier to get at and get out."

"Because, if you will use your eyes, Ed., you'll see that out in the open, the trees taper rapidly from stump to top. I want trees that will yield

at least one, and if possible, two logs apiece, with very little taper to them. Otherwise, our house will be lop-sided."

"But I say, Jack, what causes the difference? Why do trees in the thick woods grow so much taller and straighter and of more uniform size than trees out in the open?"

"Because every tree is continually hunting for sunlight and air," answered Jack. "Out in the open, each tree finds these easily and goes to work at once to put out its branches, about ten feet from the ground, and to make itself generally comfortable. But where the trees are crowded close together each has to struggle with all the rest for its share of sunlight and air. They do not waste their energies in putting out branches that they can do without, but just keep on growing straight up in search of the air and sunlight. So you see if you want long sticks you must go into the thick woods for them. Out there in that half open glade there isn't a single tree with a twenty-foot reach before you come to its branches, while the trees I have marked here in the thick woods will give us, most of them two logs apiece twenty-one feet long and with not more than three or four inches difference between their diameters at the butt and their diameters at the extreme upper end. It's a good deal so with men, by the way.

Those that must struggle for a chance usually achieve the best results in the end."

By this time the axes were all busy felling the marked trees, and within an hour or so they all lay upon the ground, trimmed of their branches, and cut into the required lengths of twenty-one feet each.

Having felled his share of them, Jack went a little further into the woodlands, and began blocking out great chips from one after another big chestnut tree. Having blocked out these chips, Jack sat down and began to split them, observing the result in each case with care. Presently he satisfied himself and set to work to cut down the giant chestnut whose chip had yielded the best results.

"What's all that for, Jack?" asked the Doctor. "Why did you split up those chips in that way, like a little boy with a new hatchet?"

"I was hunting for some timber that isn't 'brash,'" answered Jack, "to make our clapboards out of."

"What do you mean by 'brash?'"

"Why, some timber splits easily and straight along its grain, while other wood breaks away slantwise across the grain. That last kind is called 'brash,' and, of course, it is of no account for clapboards. See here!" and with that he

took up two of the big sample chips and illustrated his meaning by splitting them and showing the doctor how one of them split straight with the grain, while the other showed no such integrity.

"Oh, then, you're going to make clapboards out of this tree to roof our shanty with and to close up its gables."

"I'm going to make clapboards for our roof," answered Jack, "but not for our gables. They'll be made of logs, in true mountain fashion."

"But how is that possible?" eagerly asked the Doctor.

"I'll show you when we come to build. I can't very well explain it in advance. And another thing, Doctor, you remember that we have only ten pounds or so of nails, all told."

"That's true!" exclaimed the Doctor, almost in consternation. "We can't roof our house till somebody goes down the mountain and brings a supply."

"That's where you are mightily mistaken, Doctor. There isn't a log cabin in these mountains that has a nail in its roof."

"But how then are the clapboards held in place?"

"That again is a thing I can show you far better than I can explain it without demonstra-

tion. But we must first get our clapboards, and if you'll go back to the camp and bring a cross cut saw, I'll have this giant of the forest laid low by the time you get back, and then you and I will cut it into four-foot lengths for clapboards."

It should be explained that in the mountains of Virginia the word "clapboard" and the simpler word "board," mean something quite different from what they signify elsewhere. When the Virginia mountaineer speaks of a "board" or a "clapboard" he means a rough shingle, four feet long, simply split out of a piece of timber and not dressed in any way.

When the doctor returned with the cross cut saw, Jack first marked off ten feet of his great tree at the butt and the two set to work to sever it.

"But you said we were to cut it into four-foot lengths," said the doctor, as they began to pull the saw back and forth.

"So we are," answered Jack, "after we saw off this butt. You see, the butt of a tree is always rather brash, and so we won't use that for clapboards. Besides, I've another use for it."

"What?" asked the Doctor.

"I'm going to dig it out into a big trough and make a bath tub out of it. You see, that spring up there under the cliff has a fine flow of water.

I'll sink this trough in the ground, at a proper angle, and train the water into it. It will run in at one end and out at the other, continually, so we'll always have a fresh bath ready for any comer."

"But will the boys relish a cold bath out of doors when the thermometer gets down into the small figures?"

"Well they'd better. Little Tom is a crank on cold bathing in the morning, and if any fellow in the party doesn't relish that sort of thing, Tom will souse him in any how till he teaches him to like it. He won't do you that way, Doctor, of course, but—"

"But why not? I need the tonic influence of cold morning baths more than anybody else in the party, and as soon as we get our bath tub in place I shall begin taking them. And more than that, I'll help little Tom in the work of dousing any boy in the party that neglects that hygienic regimen."

Having sawed off the butt of this big tree, Jack went back to the house site and directed the boys as to the work of building. The forty sticks of timber already cut, when piled into a crib would make the body of a cabin nearly twenty feet square, allowing for the overlapping of the timbers, and about ten feet high under the eaves.

Jack showed the boys how to notch the logs at their ends so as to hold them securely in place and so also as to let them lie very close together throughout their length. For, of course, without notching, each log would lie the whole thickness of another log above the timber below it. Having thus started the four in the work of building, he returned to the woods where he and the doctor continued the work of sawing the big tree trunk into four-foot lengths. About noon the Doctor volunteered to go and prepare a roast venison dinner, and Jack proceeded to split the tree-lengths into sizes convenient for the riving of the clapboards.

By the time that he had accomplished this, the Doctor whistled through his fingers to announce dinner, and every member of the party was eagerly ready for the savory meal, the very odor of which made their nostrils glad while they were washing their hands and faces in preparation for it. There were not many dishes included in it—only some sweet potatoes roasted in the ashes, and some big pones of black ash cake, to go with the great haunch of roast venison.

Ash cake is a species of corn bread, consisting of corn meal mixed up with cold water and a little salt, and baked hard in a bed of hot ashes and hotter coals, and if any reader of this story has

ever eaten ash cake, properly prepared, I need not tell him that there is no better kind of bread made anywhere—no, not even in Paris, a city that prides itself about equally upon its "pain"—bread,—and its paintings, of which it has the finest collections in all the world. Finally, there was the sauce — traditionally, the best in the world,—namely, hunger. Half a dozen young fellows high up on a mountain side, who had breakfasted before daylight and swung axes and lifted logs till midday, needed no highly-spiced flavoring to give savor to their meat. They ate like the healthy, hard working fellows that they were, and they had no fear of indigestions to follow their eating.

After dinner the work of building went on apace. The main crib of the house was finished by noon of the next day, and the roof and gables only remained to be completed after that. This was to be done as follows:

Logs to form the gables were cut, each a few feet shorter than the one below. Then poles six inches in diameter were cut to form a resting place for the clap boards, and were placed lengthwise the building, resting in notches in the steadily shortening gable timbers. The gable timbers were permitted, however, to extend two feet or so beyond the notches in which the lengthwise poles

rested, and a second notch was cut in each end of each of them. When a row of clapboards was laid on the lengthwise poles, another lengthwise pole was placed on top to hold the clapboards in place, and this top pole rested in the outer notches of the gable logs, thus securely holding the roof in position, and as the clapboards overlapped each other as shingles do, the roof was rainproof.

Meantime Jack had been riving clapboards with a fro. Does the reader know what a fro is? The dictionaries do not tell you in any adequate way, though in Virginia and throughout the south and the great west that implement has played an important part in enabling men to house themselves with clapboards or shingles for their roofs. So I must do the work that the dictionaries neglect. A fro is an iron or steel blade about eight or ten inches long, about three inches wide, a quarter of an inch thick at top, tapering to a very dull edge at bottom. In one end of it is an eye to hold a handle.

The fro is used in splitting out clapboards and rough shingles. The operator places its dull edge on the end of a piece of timber of proper width, at the distance of a clapboard's thickness from the side of the timber. Then he hits the back of the fro blade with a mallet or club, driv-

ing it well in like a wedge. Then, by working the handle backwards and forwards, and pushing the fro further and further into the crack, as it opens, he splits off a shingle, or a clap board, as the case may be. In the south, and in some parts of the west nearly all of the shingles and clapboards used are still split out in this way with the fro. Until recent years, when shingle making machines were introduced, all shingles were made in that way, so that next to the axe, and the pitsaw, which used to do the work now done by the saw mill, the fro played the most conspicuous part in the creation of human habitations in all that pioneer period when sturdy arms were conquering the American wilderness and stout hearts were creating the greatness in which we now rejoice. It is stupid of the dictionaries not to tell of it.

In splitting out his clapboards from three-cornered sections of his chestnut logs, Jack gradually reduced those sections to a width too small for the further making of clapboards. This left in each case a three-cornered stick two inches thick at its thickest part, and perhaps three inches wide to its edge. The Doctor wanted to utilize these sticks for firewood and proposed to carry a lot of them to the temporary shelter for that purpose.

"Not by any means," said Jack. "Those wedge-shaped pieces are to be used for chinking."

"What's chinking?" asked the Doctor.

"Why, you see," answered Jack, "the logs of which our house or hut is built, are not quite straight, though they are the straightest we could find in the woods. There are spaces between them that are open, and when the zero weather comes we should be very uncomfortably cold in there if these spaces remained open. No fire that we could make in our chimney would keep us warm under such conditions. So we must stop up the cracks. We'll do that by fitting these pieces of chinking into the cracks between the logs, and then 'daubing' the smaller cracks with mud. That's an operation that will try your resolution, Doctor, and determine whether you are really only sixteen years old, as we voted that you were, or are a much older person, to be specially considered by us boys—for I don't know any more disagreeable job than daubing a log cabin."

"Good!" answered the Doctor. "I'll submit myself to the test very gladly. You'll show me how to 'daub' of course, and if I don't 'daub' with the best and youngest of you, then I'll give up and go down the mountain, acknowledging myself a failure. But I give you fair warning

that I don't expect or intend either to give up or to go down the mountain."

"We should all be very sorry if you did, Doctor. We've adopted you now. We've decreed that for this winter, at any rate, you are only sixteen years of age, and upon my word, if you'll allow me to say so—"

"Now, stop right there," broke in the Doctor. "Don't say 'if you'll allow me to say so.' That undoes the whole arrangement. You fellows have accepted me as a boy among boys, and you've got to stick to that. There are to be no deferences to me. There is to be precisely the same comradeship between me and the rest of you that exists among yourselves, otherwise I shall consider myself an intruder."

"All right," responded Jack, seizing the Doctor's hand and pressing it warmly. "We all feel that you are altogether one of us, and I for one shall hereafter treat you as such. So when the daubing time comes I'll set you your task like the rest of them and I'll criticize every crevice you leave open. What with an open roof—for a clapboard roof is very open—through which the wind can blow at its own sweet will, and what with the necessity of keeping the door open most of the time for light, it's going to be very hard work to keep the place comfortably warm."

"But why keep the door open for light?" asked the Doctor. "Why not let in the light through windows?"

"We haven't any windows," answered Jack, "and we haven't any sash or glass to make them with."

"Of course not," said the Doctor, "but still, if you'll let me, I'll show you how to have windows that will keep out the wind and let in light at the same time. I've all the necessary materials in my shoulder pack."

"I can't guess how you're going to do it, Doctor, but at any rate I accept your statement, and if you'll tell me what sized openings you want in the walls for your windows, I'll go at once and saw them out."

"That's what troubles me," said the Doctor. "I don't see how we are going to make window openings without sawing through the logs, and I don't see how that is to be done without weakening the structure, and letting the unsupported ends of the logs fall out of place."

"Oh, that's easy enough," answered Jack. "You tell me what sized window openings you want in our walls, and I'll take care of the logs."

The Doctor thought a moment, and then said: "Well, we ought to have two windows, each

about two feet and a half one way by about three feet or a little more the other way."

"Does it make any difference," asked Jack, "whether the long way is up and down, or to the right and left?"

"None. You can make the openings long either way and short either way."

"Good!" answered Jack. "Then I'll make them long to right and left and short in their up and down dimensions, so that I shall have to saw out only two logs for each window."

Jack went immediately to work. He split out six or eight boards, each four times the thickness of any ordinary clapboard, and, taking a handful of the small supply of nails on hand, went to the cabin now well advanced in construction, and selected the places for the two window openings. Then he nailed the thick boards securely to the logs, one on each side of one of the proposed window openings. The boards were long enough to reach over four of the logs. Jack nailed them securely to all four of the logs, thus binding the timbers together, and making each a support to all of the others. Then he sawed out three-foot lengths of the two middle logs, leaving their ends securely supported by the boards which were firmly nailed to them, and also to the uncut logs above and below. Then, to make all secure, he

fitted pieces of his thick boards to the ends of the sawed logs, and nailed them firmly into place as an additional protection against sagging.

"Now, then, Doctor," he called out, "come on with your windows. I'm curious to see what they are like."

"In a minute," answered the doctor, who was busy with his materials on a log in front of the house. He had taken two strips of thin yard-wide muslin each a little over four feet long, and with the inside of a bacon rind he was busily greasing them.

The result of the greasing was to render the thin cotton fabric quite translucent, and indeed, almost transparent. With tacks, of which there was a small supply in the Doctor's own pack, he securely fastened one of these pieces of greased muslin on the outside of the window opening that Jack had made, and the other on the inside, leaving a space of several inches between.

"There," he said, when all was done, "that will let in light almost as well as glass could do, and it will keep out wind and cold even better than the logs you sawed away could have done, no matter how well chinked and daubed they might have been."

Then he and Jack proceeded to deal with the other window opening in the same way. By the

time that they had done the boys were clamorously calling them to supper, and they were not reluctant to answer the summons. By this time the roof was on the house and a door of clapboards, split out of double thickness, was hung by hinges made of limber twigs, called withes, to pegs in the logs, and supplied with a wooden latch, catching into a wooden slot. The door opening was made precisely as the window holes were. The mountain form of log cabin involved the least possible use of metal in its construction, and except for the nails used in making the door and windows this one had involved the use of no metal at all. It was not all done, by any means, but at least its outer shell was done after two days of hard work, and the rest could be safely left till the morrow—all of it, except one thing, of which Jack was mindful during supper.

CHAPTER VI

After Supper

"BOYS," said Jack while supper was in process of consumption, "I'm afraid we've all got to do a little work to-night by moonlight. Fortunately there is a moon, but these thin, fleecy clouds mean snow or I'm mistaken."

"What is the work to be done, Jack," asked Ed. "Why," said Jack, "we've got to have some dry broom straw for our beds, and we've got to gather it to-night. Otherwise it'll all be wet."

"Broom straw" in Virginia means a tall grass of the prairie grass kind, which grows thickly in every open space. In winter it is dry and nothing makes a sweeter smelling bed.

The boys were tired after their hard day's work, but their enthusiasm instantly outvoted their weariness, for their proceedings had not yet lost the character of a sort of frolic in their minds.

"Besides," said little Tom as the supper drew to an end, "I for one am not half as tired as I was when we sat down to eat."

"Naturally not," said the doctor.

"But why is it?" asked Tom. "I don't see how I have got rested so soon."

"You've fired up," replied the Doctor. "Did you ever see an engine that worked badly for want of steam? Did you ever observe what the engineer does in that case?"

"Yes, of course; he sets the stoker to firing up under the boiler. But what has that to do with getting tired and getting rested again? I don't see the connection."

"Yet it is clear enough," the Doctor responded. "The human system is a machine. It must have energy or force or whatever you choose to call it, to enable it to do its work. Now an engine gets its energy from the coal or wood burned under its boiler. This human machine derives its energy solely from food put into the stomach. When you are tired it means simply that your supply of physical force has run low. When you eat you replenish the supply, just as firing up does it for the engine."

"But Doctor," said Jack with an accent of puzzled inquiry, "how about those people that are always tired—'born tired' as they say? They eat, but they never get over being tired."

"Dyspeptics, every one of them," replied the Doctor. "It doesn't help an engine to shovel

coal into its furnace if the coal doesn't burn. In the same way it doesn't strengthen a man to eat unless he digests and assimilates his food."

"Well now, if you people have sufficiently assimilated your food and your ideas," broke in little Tom, "let's get to work."

Some of the boys pulled the grass and piled it in rude shocks. The others carried it to the hut and bestowed it in one corner, ready for use. As they carried on the work the moon slowly went out, and just as they were finishing it, Jim Chenowith called out:

"There's the snow," and very gently the flakes began descending. "Jack you're a good weather prophet, and this time it's lucky for us that you are. Otherwise we should have had wet broom straw to sleep on all winter. By the way, how are we going to arrange our beds?"

"Why, we'll build a platform of small poles along the eastern wall of our house—the fireplace being on the western side. We'll divide this platform into compartments, each to serve as a bed. We'll lay clapboards on the poles to make a smooth surface, and on them we'll pile all the broom straw we've got. Then we'll wrap ourselves in our blankets and crawl in. Do you see?"

"Yes, but how about the fellows that must sleep

under the Doctor's muslin window?" asked Harry. "Won't they sleep pretty cold, Doctor?"

"I don't think so," answered the Doctor. "The windows will keep out the cold quite as well as the logs themselves do."

"But how can they?" How can two thin sheets of muslin keep cold out or heat in, which I believe is the better way of putting it?" asked Harry.

"They can't," answered the Doctor. "Bring those two sheets of muslin together and they would let heat out and cold in as freely almost as an open hole does. It isn't the muslin that keeps the cold out or the heat in—which ever way you choose to put it. It is the imprisoned air between the two pieces of muslin. There is hardly anywhere a worse conductor of heat than confined air. That is why in building fire proof structures in the great cities they use hollow bricks for partition walls. No amount of heat on one side can pass through the confined air in the bricks and set fire to anything on the other side of the wall. In the contracts for such buildings it is often stipulated that the owner shall be free to build as hot a bonfire as he pleases in any room he may select, and if it sets fire to anything in any other room the contractor shall pay a heavy penalty."

"But where did you get your idea of greased muslin windows, Doctor?" asked Jack. "I never heard of it before."

"I got it by reading history," answered the Doctor. "In old English times nobody but princes could afford to use glass. Its cost was too great. And then later, when glass became cheaper, a stupid government put a tax on windows, and so men went on using greased cloth instead of glass in order to get the light of heaven into their habitations without having their substance eaten up by a window tax."

"But why was it 'stupid' as you say for the government to raise revenue by so simple a means as that of taxing windows?" asked Jack.

"Because governments exist for the good of the people governed, and not the reverse of that. Otherwise no government would have any right to exist at all. A window tax discourages the use of windows. As a result the people live in darkness and foul air, which is not good for them. But governments in the old days assumed not that the government existed for the good of the people, but that the people existed for the good of the government. Never until our American Republic was established was that notion driven out of the minds of Kings, Princes and great ministers of state. It is one of our country's best services to

human kind that it has taught this lesson until now in every part of the civilized world it is perfectly understood that the government is the servant of the people, not the people the servant of the government."

"Yes, I remember," said Jack, "that when the colonies were resisting British oppression, Thomas Jefferson put into an address to George III a pointed and not very polite reminder that the King was after all only a chosen chief magistrate of the people, appointed by them to do their service and promote their happiness. There wasn't much idea of 'the divine right of kings' in Jefferson's noddle."

"No," responded the doctor, "nor in Franklin's, or Patrick Henry's or John Adams's or James Otis's. Jefferson simply formulated the thought of all of them when he contended that the British parliament had no more right to pass laws for the government and taxation of Virginia than the Virginia legislature had to pass laws for the government and taxation of Great Britain. But the beauty of the whole thing lies in the fact that these great truths, asserted by the Americans in justification of their rebellion, have been fastened upon the minds of men everywhere, and all civilized governments have been compelled to accept and submit to them. There are kings and em-

perors still, but they have completely changed their conception of their functions. They have been taught, mainly by American statesmen, that they are nothing more than the servants of the people, and that so far from owning the people, the people are their masters. But come boys, it's time to get to bed. So turn in at once. I'm on guard for the next hour and a half."

CHAPTER VII

A "Painter"

THERE was still much to do on the house and the boys set themselves at work on it very early the next morning. First of all there was a chimney to be built. Jack directed two of the boys to saw out a space nine feet wide for the fireplace, first securing the logs in position by nailing pieces of timber to them, just as he had done with the Doctor's windows. He decided that the fire place when finished should be five feet wide.

"You see," he said, "we've a hard house to keep warm and we must have a lot of fire. Now the width of a fire means as much as its other dimensions, and so I'm going to have a wide fire. We'll burn full length cord-wood in our fireplace, and we'll make room for plenty of it in front of a big back log. In earlier times an open wood fire place was the only heating apparatus people had, and they managed very well with it. Nowadays people insist that an open fire will not heat a room. I'm disposed to think that that's because they

make their fire places too small. We'll make ours big, like those of our grandfathers."

Then Jack turned to the Doctor and asked:

"Is it freezing?"

"No," answered the Doctor. "The thermometer stands at forty-six, and before noon this little skim of snow will be gone I think. But why do you ask?"

"Because we want to chink and daub our house as soon as possible, and of course we can't do it in freezing weather."

"Why not?" asked the Doctor. "We can warm our hands from time to time and make out to stand it."

"Yes," answered Jack, "but that isn't the point. If we daub in freezing weather the mud will all drop out. You see it freezes and then when a thaw comes the whole thing goes to pieces. So I'm glad it isn't freezing to-day. Now come you fellows, and let me show you how to chink and daub."

He dug away the soil at several spots, exposing the clay that lay beneath. Then pouring great pailfuls of water into the holes thus made, he set the boys at work mixing the clay into a soft plastic mud. By the time that this was well started the two who were to saw out a fire place opening had finished that task, and Jack set all at work fitting

chinkings into the cracks between the logs, and so daubing them with the soft mud as to close up all cracks, big and little, against the ingress of the winter's air.

"Now, Doctor," he said, when the boys began showing something like skill in this work, "if you'll come with me, we'll start a chimney."

They went into the woods and set to work splitting some chestnut logs into thick slabs, six or seven feet long. With these they made a sort of crib work outside the house at the point where the fire place was to be. This, as Jack explained, was to hold the fire place.

Inside of this crib, or box—about two feet inside—Jack drove some sharpened sticks into the ground and behind them he placed some clapboards set on edge. Then he called for mud and with it filled in the space between the clap-boards and the crib walls behind. Then he set another tier of clapboards and added more mud, and so on till he had the whole inside of the slab crib lined with two feet of mud held in place by clapboards set on edge and braced with stakes.

"Now, then," said Jack, "when we build a fire the clap boards will slowly burn away, but very slowly because no air can get behind them, and in the meantime the mud will bake into one great solid brick. Now for the top of the chimney."

Then he went outside and built upon this fire place a smoke stack, consisting of cribwork of sticks split out for the purpose, embedding each stick in a thick daubing of mud as he went.

By the time he finished it was night—for so eager had the boys been with their work that they had not stopped on this third day for dinner, but had contented themselves with cold bites left over from breakfast. In the meantime also the other boys had finished chinking and daubing the house.

"Now we're ready to move in," said Jim Chenowith as they sat down round the fire to eat their supper.

"Indeed we're not," answered little Tom. "We haven't built our bed yet or a table to eat on, or any chairs to sit on, and besides that the fireplace must have at least twenty-four hours in which to dry before we can build a fire in it. You're always in a hurry Jim. If we get comfortably moved into our winter quarters by this time day after to-morrow we'll do very well indeed."

"Yes," interposed Jack, "but we'll move in to-morrow night nevertheless. By that time we'll have the bed constructed and a table and some sort of chairs made, and we shall be much more comfortable in the house than out here under the cliff where it is very uncomfortably wet and

muddy since the snow began to melt. Of course we can't have a fire in the house for two or three days yet, but we can have one outside, in front of the door."

"So the programme for to-morrow is to make beds, chairs and a table?" asked the Doctor.

"That's the programme for the other boys, Doctor. You and I will in the meantime set up the chute through which we are to send the results of our chopping into the valley below. Fortunately there is a straight slide down the mountain, free from trees and landing at the right place. It was used some years ago to send big stones down. All we've got to do is to build a short chute at this end of it. Gravity will do the rest."

"But, I say Jack," broke in little Tom, "If we begin to chute sticks down there and anybody should be in the way—"

"But there'll be nobody in the way," answered Jack. "You don't imagine that I left so serious a matter as that to chance, do you? I've arranged the whole thing. Our slide ends in a spreading sort of flat down there in the valley that embraces an acre or so of level ground. Our timbers will go down there with the speed of cannon balls, but when they get there they'll slow up as the descent grows gentler, and stop on the level ground. Now I've arranged with the railroad

people that we're not to send anything down the chute till to-morrow afternoon at the earliest, and that after that we are to send nothing down till three o'clock each day. That's to give them a chance to collect the stuff, haul it away and measure it."

"By the way," asked the Doctor, "how are we going to keep tab on their counts and measurements? Must we simply trust the contractor's men for all that?"

"Not by any means," answered Jack, who carried a very good business head on his shoulders. "Not by any means. We'll keep our own count up here. On every hundredth tie that we send down I am to mark 100, 200, 300 and so forth, according to the count, using a piece of red keel for the purpose. On every big bridge timber that we send down I am to mark the length and smallest diameter, keeping an account of it all up here. As for cord-wood, every time we have sent down ten cords I am to send down a slab indicating the amount. All these markings of mine will be verified below, of course, and when we go down in the spring the contractor or, rather, his agent with whom I made our bargain—for I didn't meet the contractor himself—will settle with us. He knows us only as a single source of supply, and will credit everything we send down to the whole party of us.

So as between ourselves we must keep our own accounts so as to make a proper and equitable division of the proceeds of our work when the springtime comes. To that function I appoint Ed. Parmly. He is to keep our books. He has had experience in that sort of work in his father's store, and we'll look to him to keep a record of every fellow's contribution to the supply of timber sent down."

"But Jack," broke in little Tom, "how are we to estimate the amount of cord-wood we send down the chute?"

"We won't estimate it at all. We'll cord it up and measure it before we send it down, just as we'll count our ties and measure up our bridge timbers. What's that?"

All the boys had started to their feet at the sound of something that seemed to be a human being in excruciating agony.

After a long pause there was a repetition of the strange, pitiful cry.

"May I use your rifle, Doctor?" asked little Tom. "That's a fellow that I don't care to tackle with a shot gun, and I've located him pretty well."

"What is it, anyhow?" asked Ed. Parmly and Jim Chenowith, in a breath.

"It's a panther," answered Tom as he took the gun from the Doctor's hands, slipped off his boots

and crept stealthily and noiselessly into the woods.

"Stay here, all of you," he commanded, "and don't make the least noise."

Tom was a chronic huntsman. From his tenth year onward, as has been already told, he had spent a large part of his vacation alone in the woods in pursuit of game. Sometimes he had been absent from home for a week at a time, having taken no supplies with him, but depending exclusively upon his gun for the means of subsistence. Then he had come home heavily burdened with wild turkeys, squirrels, opossums, raccoons and game of every other species that the mountains afforded. In every matter pertaining to the chase his present comrades were willingly ready to pay deference to little Tom's superior skill, knowledge and sagacity. So they all obeyed him when he bade them remain where they were, and keep perfectly still.

There was a long time of waiting. Then came another of the demoniacal screams, but still no response from little Tom. Several minutes later came three rapidly succeeding reports from the repeating rifle, and after half a minute more little Tom called out—

"Come here all of you, and bring your guns."

The boys all hurried to the place from which the

voice came, the Doctor carrying a brand from the camp fire to give light.

It was well that he had thought of that, for light was just then badly needed. Little Tom was lying at the root of a tree, covered with blood and manifestly fainting. Only a few feet away lay the panther, shot three times through the body but still sufficiently alive to be striking out madly with his fearfully clawed fore feet in a desperate endeavor to destroy his enemy.

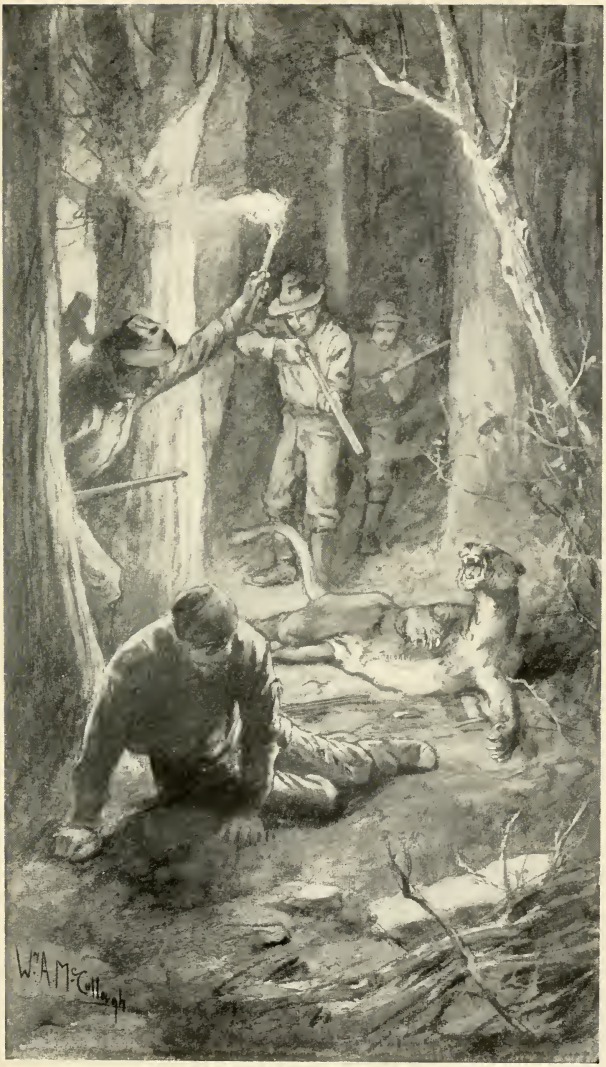
By the light of the Doctor's torch three charges of buckshot were quickly driven into the beast's vitals, and at last he lay still.

Then, all attention was given to Little Tom. Throwing his torch upon the ground the Doctor called out:

"Build a fire right there, boys, as quickly as you can. I must have light by which to examine the boy's wounds."

Willing hands produced the desired light within a very few moments, and stripping off part of Tom's clothing, the doctor discovered that the beast had dealt him two vicious blows with his horridly armed claws, one tearing his left arm severely and the other lacerating his chest. After a hurried examination, the Doctor said:

"He can stand removing to the camp if you'll carry him gently, boys, and I can treat him better



TOM WAS LYING AT THE FOOT OF THE TREE.

there than here." Then he gave a few hurried directions as to the best way of carrying the wounded boy, and the others very lovingly obeyed his instructions in removing their comrade to the main camp fire.

"Now," said the Doctor, "remove all his clothing as quickly and as gently as you can."

This was done and the Doctor carefully examined the wounds.

"It's all right, boys," he said, presently. "Tom is very painfully hurt, but the 'painter' didn't know enough of anatomy to deliver his blows in vital parts. Tom will get well, but he's fainting now. Lower his head and throw a gourdful of cold water into his face and another over his chest."

It was no sooner said than done, and no sooner was it done than Tom revived. After blinking his eyes for a moment, he asked:

"Did you fellows finish the painter?"

"Indeed we did," answered Jack; "but it's you old fellow, that we're concerned about now."

"That's all right," said Tom, "but that fellow's hide is worth a good many dollars, and better than that, we're rid of him. If I hadn't shot him he would have dropped from a tree upon some one or other of us, and in that case he wouldn't have left anything for the Doctor to do."

Meanwhile the Doctor was carefully cleansing the boy's wounds and drenching them in water in which disinfectant tablets from his pocket case had been dissolved. Here and there it was necessary to draw the edges of deep gashes together by a stitch or two with a surgical needle. "But the main thing," the Doctor expounded, "is to cleanse and disinfect the wounds. Nature itself," he added, "will repair any wound that does not involve a vital part, if it is cleansed and kept clean. The danger always is that the wound will become infected, that inflammation and blood poisoning will set in and kill the patient. Fortunately, we surgeons know now how to prevent that, and I'll answer for it that nothing of the kind shall happen to little Tom."

"But what is it that causes the inflammation and blood poisoning?" asked Harry.

"Microbes," answered the doctor; "little things that you can't see without a microscope—and some that you can't see with one. The greatest advance that was ever made in medical and surgical science was the discovery of the fact that nearly all diseases and all hurtful and dangerous inflammation is due to the presence of microbes in a wound. The moment the doctors found that out they set to work to kill the microbes. They studied them under the most powerful microscopes. They

tried all sorts of experiments with them till they learned how to kill them. Thus they discovered two greatly good things—antiseptic surgery first and after that aseptic surgery. Antiseptic surgery aims to kill all the evil germs that are already in a wound. Aseptic surgery aims to keep all evil germs out of the wounds that the surgeon must make."

"Would you mind giving us some illustrations, Doctor?" asked Jack.

"Certainly not, if you are interested," said the Doctor.

"I have practiced both antiseptic and aseptic surgery on little Tom to-night, so his case will serve to illustrate both. I have washed all his wounds with a solution of bi-chloride of mercury, commonly called corrosive sublimate, for the purpose of killing all the germs that may have got into them from that beast's claws or in any other way. That was antiseptic surgery. Then, wherever I found it necessary to take a stitch or two, I have used ligatures drawn directly out of a disinfecting solution, and perhaps you observed that I thoroughly disinfected my needles and other implements by passing them through a blaze before using them. So, also, as to my hands. Before touching Tom's wounds I thoroughly scoured my hands in a solution of cor-

rosive sublimate, so that they might not carry any possible infection to the scratches. All that is aseptic surgery. In the hospitals, where all conditions can be controlled they do this aseptic business completely. First of all, they have an operating table made of glass, which absorbs nothing and could be easily and perfectly cleansed after each operation by mere washing with water. But not content with that they scour the table with a disinfecting solution immediately before every operation. Then the surgeon, his assistant, and all the attendants are clad in garments that have been rendered 'sterile' as they call it, by roasting. So of all the towels and sheets and everything else employed about the patient's person. Everything is sterilized. The bandages and the thread or the catgut to be used are drawn from thoroughly disinfected supplies. The surgeon's instruments of every kind are laid in a panfull of a disinfecting fluid, and there are so many of each that if any one of them is accidentally dropped its use is abandoned and another is used in its stead. But come! Little Tom, you are comfortable now. Why not tell us how it all happened?"

"Well, you see," answered little Tom, "when I heard that cry and located it, I knew what it meant. I knew it was a painter or a catamount,

or a puma, or a panther, or a mountain lion—or whatever else you choose to call it, for it bears all those names and some others. And I knew what it was after. It wanted that last leg of venison of ours, but it wasn't over particular. If it couldn't get the venison it was quite ready to take any one of us boys instead.

"It's a smart beast, the panther. It sneaks on its prey and springs upon any animal, human or other, that it may fancy, for lunch. And yet it is a fool in some ways. It suffers itself to grow enthusiastic now and then, though that is very rare, and when that happens it gives that excruciating yell that we heard. I never heard that except once, before to-night.

"Well, when I heard it, I knew what it meant. I knew that unless somebody killed that panther, that panther would kill somebody in this company. At his second yell I located him pretty accurately, though, of course, you can't depend too confidently upon that, as the beast often runs a dozen yards in a few seconds. So I took your gun, Doctor, and went out to find the gentleman. For a time, I couldn't get a sight of him, but after awhile he yelled again, and I 'spotted' him. I crept up in the very dim light till I got a good view of him, crouching on a limb, and evidently planning to

spring upon me and accept me in lieu of the venison. Then I fired three bullets through him with that splendid repeating rifle of yours, Doctor, and then I had an illustration of the old adage about 'the ruling passion' being 'strong in death.' For, instead of dropping to the ground, as I had expected him to do, the beast sprang twenty or thirty feet forward and attacked me with his hideously long and sharp claws. He tore me to ribbons at his first onset, but then the three bullets I had given him from your gun seemed suddenly to dishearten him. So I managed to creep out of his way and call to you fellows to come to my rescue. The rest of the story you fellows know better than I do. For the next thing I recollect was when you doused me with the water so that I should become conscious of the prick of the Doctor's needles, as he sewed me up. By the way, Doctor, am I seriously hurt?"

"Seriously, yes," answered the Doctor. "But not dangerously, I think. You're going to have a good long rest in one of our beds over there in the new house, but surgery is now so exact a science that I think I can promise you an entirely certain recovery within a few days, or a few weeks at furthest, if you'll be a good boy and obey my instructions."

"I say, boys," called out Tom, "how fortunate

we've been in bringing a doctor along, even if we did have to resolve half his age away! Doctor, I never met any other boy of only sixteen years old who knew half as much as you do! Now, I'm tired. I'm going to sleep. Call me when it comes my turn for guard duty."

And with that the boy sank to sleep. But there was no call upon him that night or for many nights yet to come, for sentinel service.

CHAPTER VIII

The Condition of the Moonshiners

THE next day the boys moved from their temporary shelter into their permanent winter quarters, building a fire in front of the door and making themselves as comfortable as they could under the circumstances.

Meantime the Doctor and Jack had got the chute ready. It was a strong, rough structure of stout poles, forming a sort of trough, beginning on a level with the ground at the turn of the hill and extending with a heavy incline for twenty yards or so over the steep brow of the mountain. It was supported by strong hickory and oak posts and braces throughout its length. Any piece of timber placed in its upper end and gently impelled forward would quickly traverse it to its farther end and there make a tremendous leap and a long slide down the steep, into the depths below.

Little Tom, greatly to his disgust, was peremptorily ordered into bed by command of the Doctor, but two of the boys had volunteered to strip

off that valuable panther skin for him, salt it and stretch it out on the logs of the cabin to dry.

It was on Saturday that the boys removed to their new quarters, and the next day, being Sunday, was to be spent in resting. But Little Tom, as he lay there in his broom straw bed about midday on Saturday became troubled in his mind about the provisioning of the garrison.

"We've eaten up the last of the venison today," he said, "and there isn't an ounce of fresh meat in the camp. If I didn't hurt so badly, and if the Doctor wasn't such a tyrant, with his arbitrary orders for me to lie still, I'd go out this afternoon and get something better than salt meat for all of us to eat to-morrow. Why don't some of you other fellows go? If you can't get a deer, you can at any rate kill a turkey or a pheasant or two, or some partridges or squirrels, or, as a last resort, some rabbits. Oh, how my head aches! Go, some of you, and get what you can."

With that the poor bed-ridden boy turned over in his bunk and sought sleep. But Ed. Parmly and Jim Chenowith acted upon his wise suggestion. A few hours later they returned to Camp Venture bearing three hares and seven squirrels on their shoulders, and dragging a half-grown hog by withes.

"I don't know but what we've made a mis-

take," said Ed. to Jack; "the hog may belong to the moonshiners, and if so, they'll present their bill in a fashion that we sha'n't want to have it presented."

"Never mind about that," called out Tom, from inside the house. "We're at war with those people, you know, and in war you capture all you can of the enemy's supplies. But why can't you let a fellow see your game?"

The boys dragged the shoat into the hut, and Tom, expert huntsman that he was, had only to glance at it in order to pronounce it one of the wild hogs of the mountains, and anybody's property.

"Don't you see," he said,"that although it is only a half-grown shoat, it has tusks already. No domesticated hog ever developed in that way. And besides, the moonshiners haven't any hogs or anything else, for that matter. They are the poorest and most starved human beings I ever saw or heard of. I passed a week as a prisoner in one of their huts once, and I never dreamed of such poverty or such indolence. So long as they have corn pones or anything else to distend their stomachs with, they simply will not exert themselves to get anything better. They won't even go out and shoot a rabbit if they've got anything else to eat. You simply can't conceive of their

poverty or of the indolence that produces it. If one of them owned a hog he'd kill it without taking the trouble to fatten it, and he'd eat it to the picking of the last bone before he would exert himself to procure another morsel of food."

"When was it, Tom, that you learned all this?" asked Harry.

"A year ago. You remember the time I went hunting and didn't get back for two weeks?"

"Yes, but tell us—"

"Well, that time I was captured by the moonshiners and held for a week as a spy. I didn't say anything about it at home except confidentially to Jack, for fear mother would worry when I went hunting again. But I tell you fellows you never dreamed of the sort of poverty that those men and their families live in. I don't know whether they are poor because they lead criminal lives, or whether they lead criminal lives because they are poor. But I do know that that fellow told the truth the other night when he said that they do not usually have enough to eat. You saw how starved he was. That's the chronic condition of all of them; and yet these mountains are full of game and any man of even half ordinary industry can feed himself well by killing it.

"The trouble is they are hopeless people. They

have no ambition, no energy, no 'go' in them. They drink too much of their illicit whiskey for one thing, I suppose, but I don't think that's the bottom trouble. They seem to be people born without energy. They like to sit still in the sunshine, unless there is a revenue officer to hunt down and shoot. I suppose they are what somebody in the newspapers calls 'degenerates'—people that are run down even before they are born."

"But tell us, Tom," broke in Harry, "how did you get away from them?"

"Why, I watched my chance," answered Tom, "till one day I 'got the drap' on my jailer, to employ their own language. With a cocked gun at his breast, I made him promise not to follow me, and then I retreated 'in good order' as the soldiers say, down the mountain, with both barrels cocked. But really, fellows, you can have no idea of the abject poverty or the inconceivable indolence of these people. The little energy they have is expended in making illicit whiskey and sneaking it down the mountain without getting caught. Many of them have already served long terms in prison, but they regard that merely as a manifestation of the law's injustice, just as they do the hanging of one of their number now and then, when he is caught shooting an agent of the revenue. They don't understand. They are as

ignorant as they are poor, and their poverty exceeds anything that it is possible for us to conceive."

By this time Tom's scant strength was exhausted, and after muttering: "That's anybody's wild hog," he turned himself over in bed and went to sleep.

CHAPTER IX

A Sunday Discussion

"I SAY, Tom," said the Doctor, on Sunday morning, after the breakfast things had been cleared away, and the first fire had been lighted in the new fireplace, "I want to ask you something about your experience on your hunting trips."

"Go on, Doctor. No boy of sixteen—and we've voted you to be of that age—can ask me anything that I'll hesitate to answer."

"Thank you," said the Doctor, with a laugh. "Now, think of me as exactly sixteen and tell me all about it. As I understand, you have frequently spent from a week to ten days in the mountains, living exclusively upon what you could kill."

"So far, Doctor, you are absolutely right," answered the boy, who, having laid aside his headache, was disposed to be facetious.

"Well, that must have been animal food exclusively," said the Doctor.

"Absolutely," answered Tom. "I had always a little of the mineral food salt to season it with, but as for bread or potatoes, or anything else of a vegetable character, why I simply couldn't get them."

"All right. Now, the theory is that a man must have starchy foods in order to keep in good health. You had no starchy food for from a week to two weeks at a time on each of these occasions, but lived exclusively on meat. Now, what effects of this diet did you observe?"

"None whatever, except that little Tom Ridsdale had a mighty keen relish for bread when he got home again."

The Doctor then asked detailed questions as to particular symptoms, to all of which the substance of Tom's replies was that in his case no symptoms whatever had manifested themselves. "I think, Doctor," he added, "as the result of my own experience that a healthy young human animal like me, when living night and day in the open air and taking a great deal of exercise, can eat pretty much anything he pleases that we commonly recognize as food, or rather anything of that kind that he can get—without much danger of injuring himself. No, I don't know so well about that. Once, I got hurt in the mountains, and lived for a week in a barn, eating nothing

but corn. I was all right in a general way, but I suffered a good deal with cold. When I got out and killed a 'coon and roasted and ate it, the weather seemed suddenly to warm up."

"Precisely," answered the Doctor. "The fat of the coon furnished you with fuel, and you needed it. The more I study the subject, the more firmly convinced I become of two things—first, that man is essentially a carnivorous, or meat-eating animal, and second, that while starchy foods are desirable as a part of his diet, they are not absolutely necessary to him, except at comparatively long intervals. You know a baby simply cannot digest starchy foods at all. It would starve to death with a stomach full of them. Every baby lives exclusively upon the animal food milk."

"Yes," answered Jack, "but so does every colt and every calf. Yet, neither horses nor cows eat any animal food whatever after they cease to be colts and calves."

"That is true," said the Doctor, meditatively. "I hadn't thought of that." Then, after a minute's thought, he added—"but neither cows nor horses have any carnivorous teeth whatever, any teeth fit for the chewing of meat, while man has. Besides that, physicians have observed that behind almost every case of obstinate, low fevers and

that sort of debilitated disease, there is a history of underfeeding, and particularly of an insufficient use of meat, whether as a matter of necessity, or merely as a matter of choice. Persons who eat no meat, or very little meat, may seem very robust so long as positive disease does not attack them, but when they contract maladies of a serious sort, they are very likely to show a lack of stamina, a deficiency of recuperative power."

"Then you don't believe at all, any more than we meat-eating Virginians do—in the doctrines of the vegetarians?" asked Jack, as he finished the hind legs of a broiled squirrel.

"It will be time enough," answered the Doctor, "to consider the doctrines of the vegetarians when they agree among themselves as to what those doctrines are."

"Why, how do you mean?" asked Tom.

"Well, some vegetarians held a congress, or a convention, or something of that sort in New York a little while ago. There were only fifty-seven of them present, I believe, and yet they managed to split their congress up into four groups, each antagonizing the views of all the others with something approaching violence of temper."

"What were their differences?" asked Tom.

"Well first of all there was a group who advocated the eating of vegetable matters only, except that they saw no harm in the use of milk, eggs, cheese and butter. Next there was a group who bitterly condemned milk, eggs, cheese and butter as animal foods, tending to inflame evil passions and utterly to be rejected, though they ate milk biscuit and butter crackers. This second group looked with favor upon all fruits and vegetables, but here a third group took issue with them, contending that only those vegetables should be eaten which grow above ground, and utterly rejecting the thought of eating potatoes, parsnips, beets, turnips, onions, carrots, radishes and other things that develop beneath the surface of the earth. Finally there was a fourth group that agreed with the third except that they made a plea in behalf of celery, on the ground that it is naturally a plant growing above ground and is artificially imbedded in earth only by way of making it tender and palatable."

"But how about circuses then?" asked Tom.

"I don't understand," the Doctor answered.

"Why how can anybody go to a circus without eating peanuts? And about three-fourths of all the peanuts are developed under ground by burying the blossoms."

"It's all very funny," said Jack. "But the funniest thing about it is the fetish worship of that word 'vegetable.' Patent medicines are often advertised as 'purely vegetable,' as if that settled the question of their harmlessness. Yet I know at least a dozen 'purely vegetable' plants that grow in these woods which are poisonous."

"Of course," answered the Doctor, "and for that matter the most virulent poisons known to man are 'purely vegetable.' There's strychnia for example, as purely vegetable in its origin as apple-butter itself is. And there are others, such as morphine, stramonium, and nux vomica and worst of all hydrocyanic acid, commonly called prussic acid. That is so deadly that it is almost never made or kept in its pure state, because a single whiff of its fumes in the nostrils would kill almost instantly. Yet it is an extract of peach pits or bitter almonds."

"Well now I say," broke in Tom, "let's return to the subject of foods, for I am hungry, and I'm going to declare war on the Doctor if he doesn't let me have some light thing to eat like a chop from that wild boar or something of an equally digestible sort."

"Well, we'll see about that," said the Doctor, going to Tom's bed and examining and redressing his wounds. After the inspection he said:

"You were entirely right, Tom, when you called yourself a perfectly healthy human animal a little while ago. I never yet saw wounds heal in the way they are doing on you. So you may sit up for dinner to-day, and you may have whatever you want to eat."

"All right!" cried Tom, hastily scrambling out of bed. "My clamor is for pork. How are you going to cook the pig boys?"

After a little consultation, it was decided to hang the shoat before the great fire in the new fire place, and roast it whole.

"After all, it doesn't weigh more than forty pounds, and that isn't much to divide between six of us," said Harry, laughingly.

"And besides," added Ed., "roast wild shoat is as good cold as hot, or rather better. So we'll roast the gentleman whole, and I for one volunteer to sit down before him and baste him so that all the juices that belong to him shall be found succulently pervading his muscular structure."

"I'll help in that," called Jim Chenowith from outside the cabin, where he was just finishing a turn of guard duty.

Thus the little company rested and grew strong during the Sunday, and by bed time they were eager for the morning and the hard, outdoor work of tree felling that it would bring with it. With

a great glowing blaze in the fire place, which each sentinel replenished with wood before summoning his successor to take his place, the log hut seemed a delightful place to sleep in.

CHAPTER X

Beginning Work

THE Doctor was the first "boy" to crawl out of bed in the morning. He carefully inspected his weather instruments and reported:

"It's a stinging morning. Thermometer only ten degrees above zero outside; wind North-northwest, and blowing at twenty miles an hour; barometric pressure very high, indicating prolonged clear and cold weather; hygrometer indicating a minimum of moisture in the atmosphere, promises a clear sky and a bright sun to-day."

"Good!" shouted the other boys. "Now for a hearty breakfast to begin with."

"Well I for one am going to begin with an invigorating cold bath," said the Doctor seizing a sponge and two towels and running nearly naked through the biting air, to the spring under the cliff. After a shudder of hesitation all the other boys gave chase to him.

The bathing trough was not yet in place, but by

dipping sponges into the sluiceway that flowed out of the spring, and rapidly drenching their bodies with the intensely cold water, gasping for breath as they did so, they all set their blood aflow and their skins a-tingling. Then, vigorously rubbing themselves with towels as they went, they ran to the cabin and there dressed before a mighty fire of freshly replenished logs.

"Why does a bath like that feel so good after it's over?" asked Jack. For answer the Doctor gave a little physiological explanation which need not be repeated here. He ended it with this dictum: "For a man or woman or boy in full health, whose heart and lungs are sound, there is no such tonic in the world as a very cold bath on a very cold morning." Then suddenly he called out:

"Why hello, Tom! you didn't bathe, did you?" observing the boy vigorously polishing his back with a sharp Turkish towel.

"Oh, didn't I though. I've done that sort of thing every morning since I was a very little fellow, except when I hadn't the chance to do it."

"But Tom," said the Doctor in much concern, "I'm afraid this was very imprudent. Some of your wounds are still unhealed, and you might take cold in them."

"Why, Doctor, you have just been telling us

how a cold morning bath renders it nearly impossible for one to take cold, by reason of the stimulated skin and full circulation."

"Still," answered the Doctor doubtfully, "I didn't mean all that to apply to a fellow who was cut into ribbons by a catamount's claws only a few nights ago. At any rate you mustn't wear those wet bandages, so the other boys will have to get breakfast while I take them all off and replace them with dry ones."

With that he hastily slipped on a scanty covering of clothes and set to work to re-dress Tom's wounds.

"Well bless my soul!" he exclaimed presently.

"What's the matter Doctor? Anything gone wrong with that shoulder?" asked Tom.

"Gone wrong! Well I should say not. I never in my life saw the process of healing advance so rapidly. Why I gave that big scratch two weeks at least to get well in, and if I'm not absolutely blind it is practically healed up already. Bring a light one of you! There, hold it so," and with a strong magnifying glass, the Doctor minutely examined the wounded part. Then he sat back and said:

"Tom Ridsdale you are certainly the healthiest human animal I ever saw or heard of. Why a surgeon in private practice wouldn't make his salt

if all his patients recovered after your fashion. You are practically so nearly well that I am going to leave off all your bandages, only holding this newly healed cut together with a strip or two of rubber plaster for extra safety. But I certainly never saw anything like it!"

"Perhaps that's because you never before had a perfectly healthy, out-of-door boy like me as a surgical patient."

"Of course that's it. But now that I've taken off all your bandages and given you leave to eat whatever you want, you must be good enough to obey my orders in other respects. Otherwise, you might spoil this splendid result."

"I will, Doctor. Honestly, I'll do whatever you tell me."

"Well, we're going to begin chopping now, and I peremptorily forbid you to do any work for a day or two—at least, until the healing of those lacerated muscles is complete and their union firm. It would be very easy now to tear the wounds open again, and if you did that they would not heal again in a hurry. So, you must do no chopping, no lifting, no work of any kind for the present. Promise me that and in return I'll faithfully promise to release you from the restraint at the first moment when I think it safe to do so."

"All right," Doctor, answered Tom, "I'll pot-

ter about and 'keep camp' till you say I may go to work. And in the meantime I'm going to make some soup out of our scraps and bones. It will warm you fellows up when you come in cold and hungry from your chopping in this excessively cold air."

With that Tom got out their biggest camp kettle, threw all the meat fragments into it, broke up all the bones with a hatchet, and threw them in, and then filling the kettle nearly full of cold water, set it on the fire to boil.

The other boys, after breakfast, had taken their axes and gone out to begin the work of chopping. First of all, they built a fire near the timber they were about to cut, so that benumbed hands and half frozen feet might be warmed as occasion required. They all had good axes, and they all knew how to use them expertly, for these boys had been brought up in a heavily timbered country and had been used all their lives to chopping."

"Now, let's begin right," said Jack Ridsdale, "and then we'll go on right. There are two ways to fell trees in a forest, a right way and a wrong way. The wrong way is to fell them in any way that comes handy, regardless of any incidental damage that may be done as they fall. The right way is so to fell your big tree that in

falling it won't smash any of the smaller trees standing around. You see, we aren't going to cut down any tree that isn't big enough to make railroad ties—that is to say any tree that isn't full seven inches in diameter. In doing that, if we take a little care, we can save all the smaller trees, and in the course of a year or two they will grow up, and we fellows can come out here and spend another winter in chopping. It all depends upon the way in which we do our work this time, whether these lands remain a splendid forest or become a desolate waste with all the soil washed off for lack of roots to hold it, and with no hope of anything ever growing upon them again."

Then Jack, who was an expert woodchopper, explained to all the others how to chop down a tree so as to make it fall wherever the chopper wishes it to fall.

"Now, another thing," added Jack. "You, Doctor, have had less experience than the rest of us, in this business, and perhaps you'd best practice on the easier part of it first. I propose that instead of cutting down trees you devote yourself to-day to making cordwood out of the unused parts of the trees we cut to build our house with. There are several cords of good wood in them. You can cut the branches into round wood and

split the rest with the mauls and wedges and gluts." A glut is a big wooden wedge used to supplement the work of the axe and the iron wedge. The Doctor assented readily—the more because he had learned, during his sojourn in Virginia how to cut and split wood with very tolerable skill, but had never yet practiced the art of felling trees.

With brisk axes expertly wielded by strong arms, the party had goodly piles of ties and timbers and cordwood ready for the chute before noon, and as they were not to begin sending it down the hill until three o'clock the next day, they had every prospect of making a good showing with their two days' work.

CHAPTER XI

An Armed Negotiation

JUST before noon, Tom carefully removed all the bones and meat fragments from his soup kettle. Then he mixed up some corn meal dumplings and dropped them into the kettle, after the southern culinary fashion. These would answer as a sufficient substitute for bread, and as for meat, the company was to dine that day on the cold roast wild boar.

Just as Tom dropped the last of the dumplings into the kettle, he looked out through the half-open door and saw an ugly looking mountaineer creeping stealthily, and with his rifle in hand, up over the little cliff to the east of Camp Venture. His attention was evidently riveted upon the chopping boys, the scene of whose labors lay to the northwest of the house. Apparently, the man supposed the hut to be empty and intended to pass to the south of it, using it as a secure cover for his approach to the boys chopping.

Tom was a person distinctly quick of appre-

hension. In an instant, he saw what the man's plans were, and in another instant he had seized and cocked the Doctor's repeating rifle, which had fortunately been left in the hut.

As the mountaineer stealthily crept by the cabin, Tom "drew a bead" on him at not more than six paces distant, and called out:

"Lay down your gun instantly, or I'll shoot."

There was nothing to do but obey without a moment's loss of time. The mountaineer dropped his gun.

"Now, step inside," commanded Tom, still keeping the magazine rifle in position for instant and deadly use. "Step inside. I want to talk with you."

The man obeyed.

"Now, sit down on that stool," said Tom, "and tell me what you're up to. Come, now! No lying! Tell me what you were sneaking into this camp for!"

The man, who seemed much surlier and was certainly much brawnier than the former visitor to the camp, hesitated. Tom stimulated his utterance, by saying:

"Come, speak up! My patience is about exhausted, and I'm not going to wait for you to think of something false to say. Answer, or I'll shoot."

"Don't shoot, pard!" pleaded the man. "I didn't mean no harm. I only come to negotiate like."

"Then why were you sneaking and creeping upon my comrades with your rifle at full cock?"

"Well, you see, we fellers what lives up here in the mountings has to be keerful like. I wanted to make a bargain with you fellers, but if I'd 'a' walked into your camp regular like, why mebbe some on you'd 'a' shot me unbeknownst like. So I thought I'd just creep up like a catamount and git the drap on some on you, an' then tell you, simple like, as how I didn't want to do you no harm if you'd do us fellers no harm. I wanted to negotiate, that's all."

"Well, I don't like your way of negotiating," answered Little Tom, still keeping his rifle in poise against his hip ready for instant use. "I don't like to negotiate with a man that's 'got the drap on me' as you say. But now that I've 'got the drap' on you instead, I don't mind opening diplomatic relations—I don't suppose you know what that means, but never mind. Go on and tell me what it is you want."

"Well, you see," said the mountaineer, "first off we wanted you fellers to clear out'n here and git down out'n the mountings. We sent a man to you to negotiate that, an' you used him up so bad

that he ain't no 'count no more in such business. Well, you won't go. We all seed that clear enough an' at first we was a plannin' to come over here with our guns and jes' exterminate you all. But then we knew what a hullabaloo that would raise. You see, it would 'a' give us away, like, an' next thing we know'd the revenue agents would 'a' come up here with a pack o' soldiers at their back, an' us fellers would 'a' been shot down like rabbits. So we held a little confab, like, an' we decided to let you fellers stay up here in the mountings ef you'd agree to behave decent, like."

"How exceedingly kind of you!" ejaculated Tom, derisively. "And how considerate! But go on; I didn't mean to interrupt. In what particular way do you exact that we shall behave ourselves in order to win your gracious permission to remain here on land that belongs to us?"

"Now, you're a gittin' at the pint," answered the man. "We're willin' to let you alone ef you'll let us alone. We're willin' to let you stay in the mountings an' cut all the timber you like, ef you won't bother us in any way."

"In what way have we bothered you?" asked Tom, who was growing steadily angrier with the man's extraordinary insolence.

"Well, you see, you fellers has planted your wood chute jist edzackly wrong."

"How so?"

"Well, ef you should send anything down that chute it would run right through a little shanty we've got down there under the cliff."

"An illicit still, you mean?" asked Tom.

"Well, as to that—"

"Never mind. You needn't lie about it. I understand. Now, as I catch your meaning, you want us to change the direction of our wood chute, so as to spare an illicit still that you have set up down there under the cliff, to hide it from the revenue officers. You've located that still on my mother's property, without leave or license, for she owns the whole of this side of the mountain down to its very foot; you are using her timber to fire up with under your still, without paying her a cent for it. In brief, you are thieves and robbers, and you have the insolence now to come here and demand that we shall change our chute in order to leave you undisturbed in your robbery of the government on the one hand and of my mother on the other. Very well, we will do nothing of the kind. At five minutes after three o'clock to-morrow afternoon we shall begin sending timber down through the chute. If you can remove your criminal apparatus by that time we'll not interfere with you. If you can't get it away by then, you'll simply have to take the conse-

quences. But, at any rate, you can yourselves get out of the way, so that our timbers will not hurt you personally.

"Now go! Get away from here—no, don't pick up your rifle; I'll take care of that. You people have declared war on us, and in war it is not the custom to return arms to men captured and turned loose, I believe. I don't want your property, but I'm going to keep it for the present. If you'll come peaceably to my mother's house down in the town there, after we fellows go home, I'll give your rifle back to you. But not now, when you want it to shoot some of us with. Go now! and whether you get your still out by three o'clock to-morrow or not, be very careful that neither you nor any of your comrades remain there after that hour, for then the chute will begin to carry its load."

The evil-visaged man slunk away over the cliff by which he had ascended, and down the mountain. There was revenge written in every line of his countenance, and Tom quite well understood that he and his comrades must take care of themselves. Just as the fellow was marching away, with Tom's rifle leveled at him and with his own rifle lying upon the ground as a spoil of war, the rest of the company came up, but they did not interfere. They trusted Tom as a strate-

gist, and they instantly saw that this was an "incident closed" as the diplomatists say. When the fellow was completely gone, Tom lowered the hammer of his rifle, restored it to its place, picked up the captured gun of the mountaineer, lowered its hammer to half cock, and carefully bestowed it in a convenient corner.

"What is it, Tom?" eagerly asked the others.

"Wait a minute!" said the boy, "till I dish up the soup. I hope it isn't spoiled, and as for the rest, I'll tell you all about it after dinner."

CHAPTER XII

A Midnight Alarm

WHEN the boys were well under way with the business of eating dinner, they again asked Tom to tell them the nature of his " negotiation " with the moonshiner.

" Well, I'll tell you what he said and what he demanded and what answer I made. But you must bear in mind that what he said may not have been true, and what he demanded may not have been what he really wanted. You see, I had ' got the drap ' on him and naturally he made his explanations as plausible and his demands as small as he could. I had caught him creeping up with a cocked gun in his hand, evidently to take a shot at some one of you fellows, meaning, when the murder was done, to slip back over the rocks yonder without being seen or recognized by anybody. Thanks to the cat that scratched me, I was here to head him off in that. Then he pretended only to want us to remove our chute. I suppose that was a fetch, just to secure a way of

escape from the awkward position in which I and your splendid rifle, Doctor, had placed him. They may have a still down there in the line of the chute, or they may not. But they have a still and perhaps several of them somewhere about here and so they are determined to drive us down the mountain. That, at least, is my reading of the riddle."

"It is pretty certainly correct," said Jack, after thinking for a moment. "At any rate that's the understanding upon which we must base our proceedings. We must not for one moment relax our vigilance; we must not be caught napping; we mustn't let any of those people 'git the drap' on us. They have declared war on us, and we must defend ourselves at every point."

The dinner was eaten in doors by all except Harry Ridsdale, who sat outside acting as a sentinel, and took his dinner on a log. After dinner, and again the next morning, Tom volunteered to act as sentinel, inasmuch as the Doctor would not yet let him chop, or hew ties, or lift logs, or do any other work that might reopen his now nearly healed wounds.

Promptly at five minutes after three o'clock on Tuesday afternoon, the first product of their industry was sent thundering down the chute. It was a huge timber thirty feet long and full two

and a half feet thick at its smaller end. Jack had cut it at a point very near the mouth of the chute, and by united efforts, with hand spikes and the slope of the hill to assist them, the company had rolled it into place.

Jack took out his watch and observed the time carefully.

"Three o'clock was the time agreed upon with the railroad people for having everything clear down there in the valley," he said, "but according to railroad usage we'll allow five minutes for variation of watches."

When the time was fully up the boys at the forward end of the great timber withdrew the handspikes with which they had been holding it securely in place. At the same time those at the rear end of it gave it a push with their hand spikes. The log slid slowly into the chute, then with a grinding noise slipped rapidly through it, gave a great leap, and went careering down the precipitous hill, making a noise as of thunder.

Tom, with the Doctor's rifle over his shoulder —for he was acting as sentinel—had come to observe this splendid beginning of their winter's work. As the great timber bounded down the hill, and an echo of its final fall came back to announce its arrival at its destination, Tom quietly remarked:

"There may have been a distillery in the path of that log yesterday, but I wouldn't give much for the remains of it now."

"No," said Jack, "but there's money in that stick of wood. We must send down as many such as we can, and what remains of the tree from which I cut it will make many railroad ties and a lot of cordwood."

Then Jack examined the chute to see what effect the passage of the great timber had produced upon it. He found that pretty nearly all the bark had been stripped off the poles of which the chute was made. That was an advantage, inasmuch as it rendered the chute smoother for the passage of lighter timbers, which would presently render its surfaces glass-like in their polish. On the other hand the great timber in its passage had done no harm of any kind to the structure.

"That's a tribute, Jack," said Ed., "to your skill and the Doctor's, as engineers. For if that great stick didn't break any of your poles or twist any of the posts on which they rest, nothing else that we shall send down the hill will. I call it good construction, when a chute made of such stuff as you have used, carries such a weight as that without giving way anywhere."

"Yes," answered Jim Chenowith, "and, of course, the strain on the chute will never be so

great again, now that the bark has been stripped off its poles. It must have been a tremendous trial when that big log slid down, resting so heavily on the poles as to strip off every particle of bark that it touched!"

"Thanks for your compliments, boys," said Jack, "but now we've got to set ourselves to work. Between now and six o'clock we've got to send down all the ties that we've got ready, and all the cordwood besides. So quit talking and come on."

It was hard work. The railroad ties were so heavy that it required two boys to each to handle them comfortably, and the supply of cordwood was large enough to tax all the industry of the camp to complete the work before six.

In the meantime Tom had gone to the cabin to prepare supper, keeping up his sharp lookout all the while.

After supper had been disposed of, Tom quietly took his own double-barreled shot gun, slipped a charge of buckshot into each of its chambers, belted a loaded cartridge holder round his waist, and went out "just to look around," he said. Tom was so given to this sort of prowling, both by day and by night, that none of the boys attached any importance to his present movements. Had they thought anything at all about it, they

would have felt certain that little Tom had gone out only to stroll around the outskirts of the camp, as it was his habit to do.

Instead of that, however, he walked straight to the chute and presently clambered over the edge of the cliff, and by holding to bushes dropped to a ledge below. Thence, he had a very precipitous but practicable path before him for at least half way down the mountain.

Hard working and early rising as the boys were, they enjoyed their evenings in front of the great fireplace in their hut, and usually they did not go to bed till ten o'clock. This gave them three or four hours of enjoyable fireside conversation, and, as they arose sharply at six in the morning during these short days it left them eight hours for sleep, and that is quite enough for any well man, however hard he may have worked in the open air during the day.

But when bedtime came and little Tom did not reappear, they all began to feel uneasiness. Still, it was well understood in the camp that "Little Tom knows how to take care of himself," and so one by one the boys went to bed, all but the sentinel.

About midnight, Jim Chenowith, who had been on guard, came into the hut and aroused his comrades.

"I say, fellows," he said, in a deprecative voice, "I hate to disturb you, but I'm getting uneasy about Tom. It's twelve o'clock now, and he hasn't returned to the camp."

Instantly the entire party sprang out of bed and each began to slip into his clothes.

"We must build a bonfire," said the Doctor, as a first suggestion. "You see, Tom may have lost his way, and it isn't easy to find one's way about in these mountains of a dark night. If we build a bonfire, he will be able to locate the camp. If anything worse has happened to the boy, why we will—"

The Doctor did not complete his sentence, but the other boys understood, and with one voice they answered in boy vernacular: "You bet we will!"

CHAPTER XIII

A Night of Searching

THE bonfire was quickly built and stout, willing hands piled upon it the brush left over from their chopping till the blaze of it rose thirty feet into the air, illuminating the entire mountain side.

So far as anybody could plan there was nothing else to be done while the night lasted, except scour the woodlands and thickets round about, hallooing now and then; but nothing that the boys could do produced any result. Hour after hour passed and still Tom did not appear.

"It would be useless," said Jack, "to go off into the darkness to look for him. We simply must wait for daylight, particularly as we don't know what direction he took. Possibly by daylight we may track him. But unfortunately there is no snow on the ground."

"Unfortunately there will be snow on the ground before daylight comes," said the Doctor, who had conceived a great affection for little Tom, "and it will obliterate whatever tracks the boy

may have made. All the indications are for snow, and indeed it is beginning to snow now. I tell you, boys, we must make some torches and study the ground by their light. Perhaps we may find Tom's tracks before the snow covers them."

The suggestion was no sooner made than it was carried out, and by the light of great, flaring torches the whole party minutely scanned the ground, beginning at the cabin door, and prosecuting their researches in every direction.

After an hour of this work, the Doctor called out from a point near the chute:

"Come here, boys!" and when they came he said:

"Tom went over the bank at this point. See! Here are his tracks in the soft earth, and look! There are the bent and broken bushes by which he let himself down over that cliff. Thank heaven we know now in what direction to look for him as soon as morning comes. It would be useless suicide to attempt to follow his trail now."

"Well, I don't know," said Jack. "But I'm ready for that sort of suicide in behalf of little Tom. Give me your best torch, boys! I'm going to follow the trail down the mountain. You see Tom may have slipped off a cliff somewhere down there and broken his legs or rendered himself helpless in some other way. I'm going to

follow him right now, and the rest of you can come after daylight—which isn't more than half an hour off now."

"No!" said the Doctor. "If you think best to follow the trail now, we're going with you, every one of us. But first let us get our guns and some necessaries. If Tom is hurt anywhere down there I must have some appliances with which to dress his wounds. If he has fallen into the hands of the moonshiners we must rescue him, and to that end we must have guns and ammunition. Let us go over his trail by all means, but let us go prepared to do him some good when we find him!"

To this thought there was unanimous assent, and instantly the Doctor and Jim Chenowith hurried back to the house to bring surgical appliances, guns and ammunition. Meantime Jack, who was greatly excited turned to the two boys who remained with him, and said, in a voice so cold and calm that they knew it meant intense emotion—

"Boys! If the moonshiners have caught little Tom and done any harm to him, I am going to drive every moonshiner out of these mountains and into a penitentiary or better still to a gibbet, if I have to give my whole life to it. Will you join me in that? And if I get killed will you promise to go on with the work?"

By that time the others had returned, and they had caught enough of what Jack had said to understand its purport. For answer the Doctor grasped Jack's hand and said with emotion: "To that purpose I pledge my whole life and all of my fortune! If those beasts have dealt foully with little Tom, I'll hire and bring here from Baltimore a hundred desperately courageous men, every one of them armed with the latest magazine rifle there is and commissioned by the revenue chief, and I pledge you my honor that when I am through with the job there will not be a moonshiner left in these mountains! I'll do that, Jack, if I have to hang for it."

The other boys responded with enthusiasm, "We'll be with you in that job, Doctor, without any hiring!"

"Thank you, comrades!" That was all that Jack could say before the strain upon him overcame even his iron nerves, and for a moment he lost consciousness. It was only for a moment, however. At the end of that time Jack led the way over the cliff, five torches lighting the journey. Presently daylight came, and the torches were thrown away.

The trail that Tom had made of broken bushes, cliff growing saplings, bent down in letting himself drop over bluffs and declivities, and boot

marks where he had scrambled over a ledge, was not very difficult to follow for a space. But then came a long stretch of shelving rock entirely bare, with a dense forest growth beyond, where the leaves that had fallen in the autumn were still a foot deep, and beyond that point it was impossible to trace Tom's course. After earnest endeavors to recover the trail, the effort was abandoned, and sadly the little company made their way back to camp by a circuitous route, for they could not climb again the cliffs over which they had managed to clamber down.

On the way back they were encouraged by the hope that they might find Tom in the camp, when they got there, but in this they were disappointed.

They were all disposed to sit down and mourn dejectedly, but at that point the Doctor's scientific knowledge came to the rescue.

"See here, boys," he said; "we've got some strenuous work to do for Tom's rescue, and we must do some clear and earnest thinking before we begin it, in order that we may do it in the best way. We're exhausted. We have passed a night with only two hours or less of sleep, and we've eaten nothing for fifteen hours, for it's now after nine o'clock. In the meantime we have made a tiresome journey down the mountain and back again and worse still—for worry is always more

wearing than work—we have undergone a great stress of anxiety. Now we're going to do all that human endeavor can do to rescue Tom. To that end we must have strength in our bodies and alertness in our minds. We must have breakfast at once and a hearty breakfast at that."

None of the boys had an appetite, but the Doctor insisted and presently there was a breakfast served, consisting of bacon, cut into paper-thin slices and broiled on the sharpened point of a stick, held in a blaze from the fire; corn pones baked to a crisp brown in a skillet, and a brimming pot of hot and strong coffee. For butter on their bread, the boys had a mixture of the drippings from their recent roasts—the venison, the wild boar, the rabbits and the rest—all of which drippings they had carefully saved for that purpose.

Appetizing as such a breakfast was to hard-working, sleep-losing and exhausted boys, not one of them felt the least relish for it. It required all of the Doctor's urging to make them even taste their food, till presently Harry, who stood outside as a sentinel, threw down his gun and started away at a break-neck pace, calling out at the top of his voice as he went:

"There's Tom! There's Tom! There's Tom, and he's all right!"

With that the whole company abandoned breakfast and rushed out to greet the returning boy. They plied and bombarded him with questions, of course, until at last he said pleadingly:

"Please, boys, I'm awfully hungry and tired. I'll answer all your questions after awhile. Just now the only things you really want to know are that I'm back safe and sound, and that nothing worse has happened to me than the loss of a night's sleep, a good deal of anxiety about you fellows, and the getting up of a positively famished appetite. I say," he added, as he entered the cabin, "who broiled that bacon?" and as he asked the question he picked up two or three slices of it and thrust them one after another into his mouth.

"I did," answered Ed, "and now that you're back, Tom, I'm going to eat a lot of it too."

"Well cut three or four times as much more of it," Tom said, slipping still another slice of the dainty between his teeth, and following it with a mouthful of corn pone, "and I'll help you toast it. But don't let's talk till we eat something to talk on."

Ed. quickly cut a great plateful of the bacon slices, and every boy in the party except the one on guard duty, sharpened a stick and helped in the broiling.

Tom had brought their appetites back with him.

CHAPTER XIV

Tom Gives an Account of Himself

"NOW first of all," said Tom, when breakfast was over and the boys again began questioning him as to his night's adventure,—" first of all if I ever disappear again you're not any of you to worry about me. You all say that ' little Tom knows how to take care of himself,' and I believe I do, particularly when I have a double-barrelled shotgun with me and forty cartridges loaded with buckshot in my belt.

" Now to explain. I was curious to find out how far the moonshiner who ' negotiated ' with me at the muzzle of your magazine rifle, Doctor, was telling the truth, and how far he was lying. So I made up my mind to climb down the mountain, following the line of our chute, and find out whether or not that big timber had made a wreck of an illicit still down there. Of course it hadn't. That was only an ' explanation ' invented by the fellow for immediate use, when he was caught sneaking up here to shoot some of us. His sole purpose was to drive us ' out'n the mountings ' as

these people put it. His plan was to sneak up here behind the house and shoot some one or other of us, and thus compel us to 'git down out'n the mountings.' He thought we'd all be out there chopping and that after dropping one of us he could slip away unseen and of course unrecognized. He thought that then we'd quit. He didn't know that that cat had scratched me so badly that the Doctor had condemned me to stay here at the house, and so he was taken completely by surprise when I levelled that repeating rifle at him, at less than six paces distance. So he resorted to humanity's last resource, lying. I remember reading in a book somewhere that Queen Elizabeth said that 'a lie is an intellectual way of meeting a difficulty.' Well that fellow was very intellectual. He lied 'to the queen's taste'—even Queen Elizabeth's taste. He told me that he had come up here to ask us fellows to change the direction of our chute, lest it demolish his still down there—though of course he didn't admit that it was a still. I wanted to find out about that and so I slipped away and climbed down the mountain. I found the still all right—indeed I found three of them—on my mother's land, but there isn't one of them in the line of our chute or within a quarter of a mile of it. All that was a fable made up to cover the moonshiner's murderous mission.

"Well when I found the stills in full blast I made up my mind to watch their operations for a time. I was securely ensconced upon a ledge which I thought inaccessible from below, but it wasn't. For presently those fellows threw out their pickets, and one of them climbed up to my particular ledge, to keep 'watch and ward' there. There were only two things for me to do. Either I must shoot the fellow and take my chances of running away over a difficult track with which the moonshiners were familiar while I was not, or I must crouch away somewhere where the moonshining picket was not likely to see me.

"As the more prudent of the two courses open to me, I chose the latter. There was a sort of half cave there, a crevice in the rocks, and I crawled into that, and there I stayed all night, with my gun at full cock and with Little Tom every instant on the alert. My plan was to keep myself hidden as long as I could, and if discovered to get in the first shot, and then run as fast as I could. Fortunately I was not discovered, and about half past six o'clock the stills ceased operations and the pickets were called in. Then I made my way around the side of the mountain and got back to camp.

"There, that's the whole story of Little Tom's

night adventure. Now let's get to work at our chopping, for I am well enough now to do my share and I hereby declare my independence of the Doctor."

"That's all right," said the Doctor, "but if you break open any of those wounds, I'll order you to bed again."

"But wait awhile," interposed Jack. "There's something serious in all this. Obviously these people don't intend to make open war upon us. Their plan is to sneak upon us and now and then to shoot one of us from some hiding place, in order to drive us out of the mountains. Now we've got to look out for that. We can do it in two ways. First we can send a slab down the chute with a message in it asking our friends down below to send up the revenue officers and a company of soldiers to arrest all these men, telling the revenue people that we'll show them the stills and the men. In other words we can 'carry the war into Africa' as the Romans did, and put these fellows on the defensive instead of ourselves standing in that position. Or, if we don't care to do that—and there are reasons against it—"

"What are the reasons against it?" asked Little Tom, whose disposition it was always to take the offensive in a righteous controversy.

"Well, not more than a dozen or twenty of these mountaineers are actively engaged in this illicit distilling business, but all the rest of the mountaineers are their friends and most of them are their relatives, for these mountaineers have intermarried until almost every one of them is the near kinsman of all the rest. Now if we call in the assistance of the revenue officers and the troops behind them, the best that we can hope for is to put a dozen or so of them into jail, while possibly two or three of them will be shot in the melee. That will leave the rest of them to make war upon us, with the assistance of all the men of the mountains."

"Well what's the other plan," asked Tom, who very reluctantly gave up the idea of aggressive fighting.

"We must so place a sentinel every day that no man can come within rifle range of us without being discovered and stopped—with a bullet if necessary. Fortunately our camp is so placed that there are only two points at which it can be reached, and fortunately again there is one sheltered point—out there under the cliff—from which a sentinel can see anybody approaching by either of the only two roads that lead into our camp. My plan is to keep a sentinel always under the cliff out there."

Jack had so thoroughly thought the matter out that it needed no discussion. His plan was instantly adopted, one boy was sent to the sentry's post under the cliff, and the rest made a late beginning of the day's work of wood chopping.

CHAPTER XV

Two Shots that Hit

THE days passed rapidly now, as they always do when people are busily at work, and little by little the boys sent a great number of ties and timbers and many cords of wood down the chute.

One evening Tom and Ed. were "playing on the piano." That is to say they were grinding axes by the fire-light. For when the grind-stone was provided with a proper frame and set up in the house, Tom insisted upon calling it the piano, though some of the boys wanted to consider it as a sewing machine or a typewriter. One thing was certain, it must be kept in doors. Otherwise the water would freeze upon it, rendering it useless.

As Tom and Ed played upon the piano immediately after supper, Tom said to the Doctor:

"Tell us some more about beans?"

"I don't clearly catch your meaning," answered the Doctor.

"Why you once began telling us how valuable beans were as human food," said Tom, "and as

those that I ate for supper are sitting rather heavily upon my soul, I want to be encouraged by hearing some more about how good they are for me."

"Wait a minute," said the Doctor. Then he went to his medicine case and put a small quantity of something white into a tin cup. After that he opened the camp box of baking soda and added half a teaspoonful of that article; then he dissolved the whole mixture in a cupful of water and handed it to Tom.

"There! Drink that!" he said, "and I think you will be in better condition to listen to what I may have to say about beans."

Tom swallowed the mixture and then insisted upon hearing about beans.

"Well," said the Doctor, "the most interesting thing I know about beans is that without them the great whaling industry which brought a vast prosperity to this country a generation or two ago, would have been impossible."

"How so?" asked Jack.

"Why you see in order to make whaling voyages profitable the sailing ships that carried on the business, had to be gone for four years at a time, and of course they had to carry food enough to last that long. For meats they carried corned beef and pickled pork. For vegetables they had

to carry beans because they are the only vegetable product that will keep so long. There were no canned goods in those days, so it was beans or no whaling."

"Didn't they get fearfully tired of four years' living on nothing but beans and salt meats?"

"Of course. And of course they managed sometimes to pick up some fresh food, like sea birds' eggs or the sea birds themselves—though they are very bad eating because of their fishy flavor; and sometimes, too, the whaling ships would stop at ports on their way to the North Pacific whaling waters and buy whatever they could of fresher food. But in the main the men on whaling voyages had to live on salt meat and beans, and one of their most serious troubles was that they suffered a great deal from scurvy. By the way, that's something that we must look out for."

"That was caused by eating too much pickled meat, wasn't it?" asked Tom.

"They thought so then," said the Doctor, "but we have another theory now. That's a very curious point. For a long time it was confidently supposed that there was something in the salt meats that gave men scurvy. After a while it was discovered that it was something *left out* of the pickled meats that produced that effect. It seems

that the brine in which meat is pickled extracts from the meat certain nutritious principles which are necessary to health, and that it is the lack of these nutritious principles that gives men scurvy. So an old whaling captain, with a sound head on his shoulders, concluded that the thing needed to prevent scurvy was for the men to consume the brine in which the meat was pickled. He ordered that the brine should be used instead of water in mixing up bread, cooking vegetables and the like."

"Did the thing work?"

"Yes, excellently, and the plan was adopted in all the Canada lumber camps where scurvy was as great an enemy to success as it was on the whaling vessels themselves. Another thing they do in the lumber camps is to quit cooking their potatoes the moment that symptoms of scurvy appear. Raw potatoes seem to have a specific effect in preventing and even in curing scurvy."

"Scurvy is a sore mouth, isn't it?" asked Tom.

"Not by any means," answered the Doctor. "Sore mouth is one of the earliest and mildest symptoms of the disease, and nobody knows what sore mouth means till he has had a touch of scurvy. It means that the mouth in all its membranes is afire, and that everything put into the mouth,—even though it be a piece of ice—burns

like so much molten iron. But the mouth symptoms are only a beginning. Presently the knees and other joints turn purple and become excruciatingly painful. Then they suppurate, and in the end amputation becomes necessary. There are few worse diseases than scurvy, and we boys must protect ourselves against it by every means in our power. It threatens us with a much more serious danger than any that the moonshiners can bring upon us."

"By the way," said Jack, "the moonshiners seem to be letting us alone now. Perhaps they have given us up as a bad job."

"That's just what they want us to think," responded Tom. "They are lying low, in the hope that we'll accept precisely that idea and relax our vigilance. That is the one thing that we mustn't do on any account. That reminds me that it's time for me to go and relieve Jim Chenowith on guard duty."

"Well, before you go, Tom," said the Doctor, "I want to suggest that you take a day off tomorrow and get some fresh meat for us. We have lived on salt meat for five or six days now, and a big snow may come at any time to cut us off from fresh meat supplies. Besides our provisions are very sharply limited in quantity and we mustn't use them up too rapidly. We don't want scurvy

in the camp and we don't want a starving time. So boys I propose that Tom, as the best huntsman in the party, be detailed and ordered to devote to-morrow to the duty of getting some game for our larder."

The suggestion was instantly and unanimously accepted. Then spoke up Harry Ridsdale:

"It'll be a hard day's work for Tom, as there's a slippery, soaplike snow on the ground, and he needs to be fresh for it. So I volunteer to take his turn on guard to-night and let him get in a good, straightaway sleep."

"Good for you, Harry," said Jack. But Tom protested that he was perfectly ready to stand his turn of guard duty and insisted upon doing so. The others unanimously overruled him, however, and so Harry shouldered his gun and went to relieve Jim Chenowith as picket. Before going he said:

"Now, fellows, there is to be no more talking tonight, for when the Doctor talks I want to listen. I've a whole catechism of questions to bother him with, but it's bed time now and you fellows must crawl into your bunks at once, without any further chatter. To bed, every one of you!"

As it was full ten o'clock the boys accepted the suggestion, and in a few minutes afterward, Camp Venture sank into silence, while Harry stood

guard out there under the cliff, and the stars glittered above him in a wintry sky. Meantime the logs blazed and sputtered lazily in the great fireplace, and the night wore on, with no disturbance in the hut except when a sentinel came in, woke up his successor, replenished the fire and crept into his broomstraw bed.

About four o'clock the boys were startled out of sleep by the crack of a rifle, and the instant response of both barrels of a shotgun.

They were up and out in a moment, for it was their habit just then to sleep in their clothes and even in their boots, and for each to keep his gun by his side ready for instant use.

Running as fast as possible, they quickly joined Ed. Parmly, who was on picket at the time, and hurriedly questioned him.

He reported that the rifle shot had come from the edge of the cliff over which the road down the mountain led. He added:

"I sent two charges of buckshot in that direction, but without aim, of course, as it is too dark to see. I reloaded at once, and while I was doing so I heard a groan off there. Perhaps we'd better look the matter up."

Just then came another groan, and, at Tom's suggestion, torches were lighted and an exploration made.

Just over the edge of the little cliff they found a mountaineer. He was in a state of collapse, nine buckshot having passed through the fleshy part of his thigh, cutting arteries and big veins enough to cause profuse hæmorrhage.

"The man is badly hurt," said the Doctor. "We'll carry him to the hut at once and see what can be done for him."

Willing hands lifted and carried the fainting man, and once in the hut the Doctor called for all the torches that could be lighted. Hurriedly he inspected the man's wounds, taking up an artery and putting a compress on a severed vein as he went. Finally he said:

"Fortunately none of the buckshot struck the bone. It is only a flesh wound though it is a very bad one. By the way"—the Doctor was seized with a kindly thought—"Ed. Parmly is probably more anxious about this thing than any other boy in the party, and he is still out there on picket. Suppose one of you fellows goes out there to relieve him and let him come in to find out the amount of damage done by his shot."

The thought appealed at once to the kindly feelings of the boys and they all instantly volunteered, but Jack, as the next in order on the sentry list, claimed the privilege of relieving Ed.

When Ed. came in he first of all wanted to hear

whether or not the man he had shot in the darkness was likely to die of his wounds.

The Doctor promptly reassured him on that point.

Then Ed said:

"Well, Doctor, if you are quite through with him, suppose you look at a little scratch that he gave me. I didn't want to say anything about it, but maybe it is better to have it attended to."

The Doctor turned instantly and began stripping off the boy's clothing. He found that a bullet, striking him in the left side, had passed between two ribs, almost penetrating the hollow of the lower chest, but without quite doing so. It was one of those wonderful vagaries of bullet wounds that would kill in ninety-nine cases out of a hundred, but which in the hundredth case do a minimum of damage.

The Doctor having satisfied himself that no vital organ had been touched, carefully disinfected the wound and swathed it in bandages. As he did so he said to the boy:

"Why didn't you tell us at the start, Ed, that you were wounded?"

"Well you see," said Ed, "I was more concerned about the other fellow. It isn't a pleasant thing to kill a man, even when you've got to do it in self defence. So as I knew by his groans that

he was worse hurt than I was, I didn't say anything about what his bullet had done till you were through with the job of dressing his wounds."

"Will you permit me to remark," said the Doctor, "quite casually and in parentheses as it were, that you, Ed Parmly, are a hero? I haven't met a great many heroes in my time, but you are one of the few. Now you're going to bed, and I'm going to play tyrant over you till this wound gets well. But upon my word, I never knew two shots fired in darkness that did their work so effectively as yours and that mountaineer's did."

With the instinct of his science the Doctor had no thought of questioning the wounded moonshiner. But Tom had no scientific training and no particular scruples concerning the matter. So he turned to the mountaineer, who was occupying his bed, and asked in a peremptory voice:

"Why did you shoot Ed? What harm had he done you? What right had you to shoot at him."

"Well, you see," said the mountaineer, taking up the familiar parable, "we fellers what lives up here in the mountings can't afford to have no intruders around. You fellers is intruders, and we're agoin' to drive you out'n the mountings. You mout as well make up your minds to that fust as last. We's done give you

notice to quit, fair and square. You won't quit. So all they is fer it is to kill you an' that's what we've set out to do."

"But, my friend," said the Doctor, whose training had taught him to regard reason as the ultimate court of appeals in human affairs, "we are here with a perfect right to be here. We have in no way interfered with you or your friends. You have absolutely no right to interfere with us."

"All that don't make no difference whatsomever," answered the mountaineer. "We fellers what lives up here in the mountings don't want no spies an' nobody else up here. You fellers has got to get out 'n the mountings an' that's all about it."

"But what right have you?" asked the Doctor, "to drive us out?"

"Well, we ain't a discussin' of rights now," answered the mountaineer. "We're a talkin' business. You fellers has got to git out'n the mountings."

Here Tom broke in, with his hot temper:

"So that's your last word, is it? Well, now let me give you our last word. We are going to stay here. We are going to defend ourselves in our rights, and now that you've threatened to kill us, and tried to kill us, we've a perfect right

to do a little shooting on our own account, and I give you warning that if any one of you is caught in this camp, or anywhere near it, we'll understand that he has come here to carry out your threats, and we'll shoot him without waiting to ask any questions. As for you, we ought to send you to jail for shooting one of our party. I for one vote to do that. We can lock you up in the penitentiary for that offense, and we're going to do it. Just as soon as the Doctor says you're able to travel, I'm going to take you down the mountains at the muzzle of a gun, and put you in jail. I'm tired of this thing."

This aspect of the case had not presented itself to the minds of the other boys, but they approved Tom's plan instantly. The right thing is always and obviously to appeal to the law for redress where a wrong has been done, and perhaps the jailing of the mountaineer, under a charge of "assault with intent to kill"—an offense punishable by a long term of imprisonment,—might deter the others from like offenses.

"Well, it's pretty hard," said the mountaineer. "I've just got out only three months ago, after a year in prison, for nothin' but helpin' some other fellers to make a little whiskey without a payin' of the tax; an' now I've got to go back to grindin' stove lids for nothin' but shootin' at people that

stays in the mountings in spite of all our warnin's."

Obviously the man was utterly incapable of realizing the nature or the atrocity of his crime. Obviously, also, he was incapable, as his comrades were, of seeing that anybody but themselves had a right to stay in the mountains when they objected.

But Tom was bent upon carrying out his idea of taking the man down the mountain and bringing him to trial for shooting Ed, and the other boys fully sanctioned it.

"It may teach these people," said Jack, "that there are other people in the world who have rights. That will be a civilizing lesson."

"Yes," said Tom, "and besides that, it will lock up a man who seems to know how to shoot straight even in the dark. Anyhow, I've made up my mind. As a 'law-abiding and law-loving citizen' I'm going to put that fellow into jail, and send him afterwards to the penitentiary for a ten years' term, if I can, for shooting Ed Parmly with intent to kill him. It will be a wholesome reminder to the rest of these moonshiners that they had better not shoot at us fellows. So, just as soon as the Doctor says he's able to travel, I'm going to escort him down the mountain and deliver him to the sheriff of the county. In the

meantime, daylight is breaking and it's time for you fellows who have the job in charge to begin the preparation of breakfast."

So, after all, Tom did not get much sleep as a preparation for his game hunting trip of the coming day.

CHAPTER XVI

The Doctor Explains

ED'S wound did not incapacitate him for the task of standing guard over the wounded and captured mountaineer. Ed was able to get out of bed and sit about the house with a gun slung casually across his knees or his shoulder, as the case might be, and the mountaineer perfectly understood that Ed did not mean for him to escape, by any possible chance, even when his strength should return. So he was content to lie still and reflect as he did, that "this is better than the prison anyhow."

Tom went hunting, as the Doctor had suggested that he should. Three of the boys continued the chopping, while one stood guard—a duty that had been made more imperative than ever by the mountaineer's declaration of the fixed purpose of the moonshiners.

When Tom returned in the evening he was overladen with game, as it was his custom to be on his return from a hunting expedition. He

had two big wild turkey gobblers, a great necklace of fat squirrels, nearly a dozen hares and a small deer which he had dragged down the mountain because of his inability to carry it with his other load upon him.

"Here's meat enough," he said, "to last till Christmas anyhow," for it was now well on into December, "and I've seen a big turkey gobbler that I mean to get for our Christmas dinner. He can't weigh less than twenty or twenty-five pounds, and he's a shy, wise, experienced old boy; but I've found out what his usual rambles are and if the Doctor will lend me that long range rifle of his, I'll promise to get that bird for Christmas. I don't believe it would be possible to get within shot gun range of him."

"Oh, you can take that gun, Tom, whenever you please," answered the Doctor. "In fact, I'm going to give it to you right now. Only I'll ask you when you go down the mountain with our prisoner, to mail a letter for me, in which I will order another gun of the same sort."

"But, Doctor," said Tom, in protest, "I didn't mean—"

"Of course you didn't," answered the doctor. "If you'd meant anything of the kind, I wouldn't have thought of giving you the gun. As it is, I don't know anybody living that could make a bet-

ter use of such a gun than you can. So it is yours, and I'm going to send for another just like it for myself. In the meantime, I'll borrow your shotgun for such casual uses as our camp life may require. Of course, you'll need the shot gun also, sometimes, but the rifle's yours, and I am sure it could not be in better hands."

The boy made his acknowledgments as best he could, and the best part of them was his fondling of the rifle itself in loving appreciation. But in his embarrassment over the doctor's generosity, he wanted to turn the subject of conversation, and as supper was by this time over, he said:

"Now, Doctor, you were telling us the other night something about the old-time whaling ships. Won't you tell us to-night something about the modern ocean steamers?"

"Yes," broke in Jack. "You see, you are the only 'boy' among us who has ever seen a ship, and I believe you have crossed the ocean several times."

"Yes, many times," answered the Doctor, meditatively, "and there are many points of interest about a great modern ocean steamship, which it will please me to tell you about if it will interest you to hear."

The boys expressed an eager desire to hear, and so the Doctor proceeded.

"In the first place," he said, "there is nothing in the world so complete, so independent, so self-reliant, as a first-class steamship. She has everything on board that she can possibly need, or else she has the means of making it for herself. She makes her own electric lights, and every stateroom is supplied with them. She does not carry fresh water for drinking and cooking use, because she has a distilling apparatus capable of producing all needed fresh water from the salt water of the sea. This is a great advantage. If you have ever read sea tales, you know that in cases of long detention, one of the worst of troubles in the old days was that the water became foul and the use of it bred disease. The modern steamship always has a supply of perfectly pure distilled water."

"But, Doctor," asked Ed., "suppose one of the big steamers should break down at sea, with her machinery out of order, and wallow around out there on the waves for a month or two, wouldn't the crew and passengers all starve to death?"

"That could hardly happen," said the Doctor, "for reasons which I will explain presently. But even if it did happen, the crew and passengers would not starve, for the reason that every great ocean liner carries in her hold enough food to last her passengers and crew for fully six months, al-

though I believe the law requires them to carry only one month's supply."

"How many are there on board usually?"

"Oh, that varies with every voyage. The big ships often carry three or four hundred first-class passengers and have crews numbering from seventy to one hundred men. But some of them carry, also, a large number of steerage passengers. I once crossed from Italy on the North German Lloyd's steamer Ems, when we had only twelve first class passengers, five second class and fifteen hundred in the steerage."

"And she carried food enough for all those people for six months?" asked Jack, in wonder.

"Yes, and more."

"What sort of food was it?"

"Beans by scores of tons; corned beef and mess pork by hundreds of barrels, and an almost unlimited supply of canned meats and vegetables," answered the Doctor.

"Now, as I said," the Doctor resumed, "no great steamer is ever likely to be delayed for a month or anything like a month, at sea. In the first place, each of them carries a skilled chief engineer and a corps of competent assistant engineers, a force of blacksmiths and machinists, and better still, duplicates of all those parts of her engines that are liable to break down. I remem-

ber one voyage on the American liner Berlin, when in midocean one of our cylinders cracked and threatened to burst under the steam pressure. The captain stopped the ship and the engineers and machinists cut that cylinder out. We lay there for twenty hours in a surging sea, and then proceeded, running with only two of our three cylinders in use."

"But what an awful bobbing about you must have got," said Ed., "lying out there on the sea, with no headway."

"Oh, no!" answered the Doctor. "Our bow was kept always toward the oncoming waves, so that we rode rather more easily than if we had been running under steam, for if we had been running we should have laid our course straight for New York, taking the waves from any direction. As it was, we got them dead ahead."

"But how did they hold the bow always toward the coming waves?" asked Ed.

"By the use of what they call 'sea anchors.' These are great hollow cones, made of iron. At the big end of each a cable is fastened, and the anchors are thrown overboard, usually three or four of them. Of course, it is impossible in deep seas to send an anchor down to the bottom, but these big cones catch the water, and by their dragging in it, they hold the ship pretty nearly station-

ary, and, more important still, they keep her head always pointed toward the wind and waves, so that she rides easily. Whenever a ship breaks down at sea she hoists three great black disks into her rigging. These mean to any ship that may approach, that the steamer is 'not under control' —that is to say, that as she is not running, she has no power to steer to one side or the other or in any other way to keep out of the path of the approaching vessel. Then, the approaching vessel steers clear of the disabled steamer, and usually she hoists a set of signal flags, asking if the steamer needs or wants any assistance, and the steamer replies with another set of flags giving her response to the offer. The flag signalling system has been so completely perfected by international agreement that two captains can carry on any conversation they please by means of it, even though neither can speak a word of the other's language.

"Now this is the other reason why no steamer is ever likely to lie crippled on the ocean for a month or any thing like it. There are regular pathways on the ocean over which all the regular line steamers pass. So, while the ocean is so immense that you may steam over it for days without seeing a vessel of any kind, nevertheless no steamer is likely to lie disabled for more than a

few days without sighting some other that stands ready to render assistance. If the disabled steamer needs anything the other furnishes it. If she is too far broken down in her machinery to repair it at sea, the other will generally take her in tow. If she is likely to sink—the most unlikely of all things—the other will take off her crew and passengers and leave the ship to her fate."

"Why do you say, Doctor, that sinking is the most unlikely of all things?" asked Jack. "I should think it the most likely."

"Not at all," the Doctor replied. "The modern steamship is perhaps the most perfect product we have of scientific precision in construction. As well as you know that twice two makes four, the builders of a modern steamship know to the uttermost pound the amount of strain that any wave blow can put upon any part of the ship, and they provide for it four times over. Except in case of collision in a fog, the great ocean liner simply cannot sink at sea. If you took her out to mid ocean and there abandoned her, she would float securely until some current should drive her on rocks or some other sort of shore. At sea, she is absolutely unsinkable, except as I say by collision, and that is as true when she is carrying thousands of tons of freight as at any other time."

"It is very wonderful," said Jack.

"Of course it is. If I were called upon to name the modern seven wonders of the world, I should unhesitatingly put the ocean greyhound first in the list. But come boys! It is past our bed time, and we've heavy work to do tomorrow in getting those three great timbers ready to send down the chute."

"I'm awfully sorry," said Tom.

"Sorry—for what?" asked the Doctor.

"Why, now that you've told us so much about the great ships, I want to hear more. I've at least a hundred questions to ask you."

"Very well," said the Doctor. "The winter will be long and we'll have abundant opportunities of evenings to ask and answer all the questions we please. But just now our business is to get to bed and to sleep, or rather that's the business of you other fellows. My business is to go out and relieve Jim Chenowith as our picket guard. So good night boys, and good, refreshing slumbers to you!"

With that the Doctor shouldered a gun, first carefully examining its cartridges, and strode out into the bitterly cold night to do his turn at guard duty. He had indeed made himself a boy among boys, and he had won all hearts.

CHAPTER XVII

Christmas in Camp Venture

AS breakfast was in course of preparation the next morning, Ed. brought a large dripping pan and set it in front of the fire.

"Now you fellows," he said, "who are broiling bacon on the points of sharpened sticks, will please let the fat from it drip into this pan, and you'll kindly do the same from now till Christmas."

"What's up Ed.?" asked Jack. "What do you want us to do that for?"

"Why the Doctor insists that I must stay indoors till after Christmas, so quite naturally it is going to fall to me to cook the Christmas dinner. I take it for granted that little Tom is going to get that big turkey gobbler he told us about, and I'm going to cook it properly—or as nearly so as the limited resources of Camp Venture will permit. To that end I shall want some drippings

from broiling bacon. So save all the fat you can, boys, from now until Christmas."

The boys asked no questions, knowing that Ed. Parmly was by all odds the best cook in the camp, but they saved all they could of the drippings from the slices of bacon that they were toasting in the fire.

Three days before Christmas, Tom took his rifle and went out on the mountain in search of his big turkey. He brought back some game—Tom never failed to do that—but he came back without the big turkey, though it was well after nightfall when he arrived at the camp. Some of the boys were disposed to joke him about his failure, though of course in a friendly way.

"That's all right fellows," answered Tom. "But I've promised you that big turkey, and I'm going to deliver the goods."

"How can you speak so confidently, Tom?" asked Harry. "You've missed getting him today and you may miss getting him tomorrow and next day."

"But I shan't do that," answered Tom with that confidence which is born of knowledge and skill. "I know where that turkey and his flock are roosting tonight, and I'll be there before daylight tomorrow morning. I'll be right under him when he wakes, and I'll have my shot gun with

me, for the range to a roost is short. I'll have that turkey gobbler here before noon tomorrow, or I'll admit that I'm no hunter."

"But suppose he quits his roost during the night and wanders away somewhere," suggested the Doctor, who knew nothing of the habits of wild turkeys.

"Turkeys never do that," answered Tom. "When once they go to roost they stay there till the dawn broadens into full daylight. Nothing could persuade them to quit their perches much before sunrise, and before that time I'll have that stately gentleman flung over my shoulder."

Accordingly Tom left camp about two hours before the daylight came, and about ten o'clock he returned, bearing the gigantic gobbler, in triumph, and with it two smaller turkeys which he had also killed.

"There you doubters!" he said as he flung down the birds, "I promised you a turkey dinner for Christmas and I've kept my word. It only remains for Ed. to cook the big bird properly and I haven't the least doubt that he'll do that. The other two will keep in such weather as this as long as we care to keep them. What with the game we already have on hand, and these three turkeys, I think we're in no pressing danger of an outbreak of scurvy in camp, are we Doctor?"

"So long as you are around, Tom," answered the Doctor, "I shall feel no apprehension of scurvy, and still less of starvation."

Tom had shown his spoil at that part of the camp where the other boys were chopping. Having done so he carried the turkeys to the house and delivered them over to Ed., who, incapacitated for other work by his wound, had made himself at once sentinel in charge of the prisoner and company cook.

As soon as Tom left the choppers, Jack stopped his work, and said to the others:

"I say, boys, Tom was a Christmas baby, and this coming Christmas day will be his eighteenth birthday. Isn't there any way in which we can celebrate it?"

"Yes," answered the Doctor, "We'll give a big dinner in his honor on that occasion and surprise him with it. I have been jealously saving a few onions and potatoes that I brought up the mountain in my pack. I have carefully guarded them against frost as well as against use, meaning to keep them all winter in case scurvy should appear among us. But evidently Tom is taking care of that by keeping us abundantly supplied with fresh meat. So I'm going to suggest to Ed. that on Christmas day he roast the onions in a pan or skillet and bake the potatoes in the

ashes. That, with the big turkey, will give us a dinner fit for princes."

"Good!" cried the others, "and we'll pretend to forget all about it's being Tom's birthday," added Jim Chenowith, "till the dinner is dished up in his honor. Then we'll congratulate him."

Ed. fell in with the plan with all heartiness when he was told of it. He was a notably good cook considering that he was a boy, and he was determined to produce the best result he could with the meagre means at his disposal.

On Christmas morning he took the giblets of his big turkey—the gizzard, liver, heart, the outer ends of the wings and the upper part of the neck, and put them on the fire to stew.

Then he puzzled his brain over the question of a stuffing for the gigantic turkey. He had no wheaten bread of any kind, and he doubted that corn bread could be made to answer. Just then he remembered that a box of crackers, two-thirds full, remained among Camp Venture's stores. He hunted them out and took as many of them as he needed. He toasted each to a rich crisp brown. When all were toasted he reduced them to crumbs. Next he mixed the crumbs together with the bacon fat drippings that he had made the boys save from their broiling. He added just enough water to make the mass half adhere to-

gether. Then he chopped up one small onion and mixed it with the stuffing. After adding a little chopped bacon and a liberal supply of black pepper, he pressed the whole mass into the hollow of the big bird and hung the turkey up before the fire to roast, placing a dripping pan under it, setting it whirling at the end of a string, and from time to time basting it with the drippings that fell into the pan.

A little later he placed the potatoes in the hot embers to bake. He put the onions into a skillet and placing live coals under and upon the lid of that utensil, left them to roast. Still later he made up some corn pones and set them to bake in another skillet. Finally, just before dinner time, he brewed a great pot of coffee.

But in the meantime he had taken the giblets off the fire, chopped them to a mince meat and poured them into the dripping pan that had reposed under the turkey as it roasted. Into this he poured the water in which the giblets had been stewed and added a little of the cracker crumbs for thickening, a little salt and a liberal supply of pepper. This done he stirred all together vigorously and produced a gravy of which even his mother—the best cook he had ever known—might have been proud.

At the very last he dug the potatoes out of the

ashes, split open one side of each and inserted, in the mealy depths, a freshly broiled slice of bacon. This was to replace the butter which he had not.

Then he called the boys to dinner, but as the day was warm he served the meal on an improvised table out of doors, from which both points of possible invasion of the camp could be fairly well observed. He did this in order that the whole company, sentinel and all, might sit down together in celebration of Christmas and of little Tom's birthday.

When the little company assembled, each member of it grasped Tom's hand and warmly congratulated him, and when the boy learned how they had exerted themselves to make his natal day one to be remembered, he fairly broke down with affectionate emotion. It was assigned to him to carve the great turkey gobbler, which in the absence of scales on which to weigh him, the boys pretty accurately estimated at twenty-six pounds. Jack served the roast onions, which were done to a beautiful brown, and Ed. himself dished out the potatoes, roasted to a hard crust without and enticing mealiness within.

The coffee was drunk with the meal after the manner of the country, and of course there was no milk to go with it, but these healthy, happy,

out-of-door boys enjoyed that Christmas dinner as they had never enjoyed a dinner before.

Just as they were finishing the eating of it something struck and penetrated the clapboards that formed the extemporized table. Tom instantly glanced at the mark made, estimated direction and, turning, sent a bullet from his long range rifle toward the point from which he believed the shot to have come. A moment later there came another shot and another, and this time Tom saw the smoke of the rifles from which they came. He aimed carefully but quickly, and fired two shots in reply.

"There!" he said. "They are shooting from long range, or what they regard as such, up there on the mountain. They think we have nothing but shot guns and their plan is to shoot at us from too great a distance for us to shoot back. I reckon those three bullets of mine will give them a new idea of the situation, for this rifle carries at least twice as far as any they have."

Apparently Tom was right, for after his shots were delivered no more was heard from the assailing mountaineers.

"Now that teaches us a lesson," said Jack. "Our house door faces directly south and up the mountain. There are points up there from which those rascals can fire right into our house through

the door, whenever they feel so disposed. We must stop that right now."

"But how?" asked the Doctor.

"By building a bullet proof barricade of poles right here, ten feet in front of our door," answered Jack. "We can easily do it this afternoon and still get some chopping done."

Jack's suggestion was adopted instantly and the boys set to work at once to carry it out. They set up some poles about fifteen feet high and six feet apart, burying their lower ends deep in the earth. Then they set up a second line in the same way about eight inches in front of the first line. Next they placed in the space between the two lines a tier of poles about five inches thick and so closely fitted together as to be bullet proof. Then for complete safety they cut small brush into pieces, and with them filled in what space remained between the two lines of poles.

"Now then," said Jack, "Camp Venture is in a state of defence. But it needs offensive as well as defensive advantages. We are pretty well protected against stray bullets by the wooden barrier we have erected, but we must also be able to shoot over it whenever that becomes necessary. Let's build a platform inside of it, so that one of us standing on it can see everything beyond and

shoot as from a breast work, if those fellows insist upon shooting as a condition of the game."

So the boys built the platform of poles, with a little ladder leading up to it, and as it gave a full view of every part of the camp, it was decided that the sentry should thereafter be stationed there in a protected position, instead of being required to expose himself out under the cliff.

CHAPTER XVIII

Parole

DURING the next week or two after Christmas the boys made notable progress with their chopping, for even the Doctor had by this time become as expert as any of them in wielding an axe, while the other boys, who could scarcely be more expert with that implement than they were at the beginning, acquired a good deal of extra skill in the particular work they were now doing. They more readily recognized the use to which each piece of timber could be put; they acquired new deftness in shaping railroad ties to their destined use, so that the work was done more quickly and with a smaller expenditure of time and force; especially they learned and invented many devices to facilitate their handling of the great bridge timbers, of which they were now sending many down the chute.

All of them except Ed chopped all day. Ed volunteered to take the duty of camp guard upon himself all day every day, so long as his wound

should incapacitate him for the hard work of chopping. There was double guard duty to do now of course, for in addition to the guarding of the camp there was the prisoner to watch. But now that the barricade with its platform was built in front of the hut, Ed was confident of his ability to watch both inside and outside, particularly as the wounded man was pretty nearly helpless still, and the boys took all the guns with them when they went chopping, except the one that Ed was using as sentinel. There was still another advantage in the fact that there was now nearly a foot of snow on the ground, and it would have been easy to see a man toiling over its white surface at a great distance.

So Ed played cook and camp guard all through the days and was excused from all night duty.

In the meantime there was no more trouble from the mountaineers, except that the wounded one in camp continually bewailed his fate and indulged in dismal forebodings of the long term he must serve in prison. Finally one Sunday, when his wounds were nearly well again, he said:

"It ain't so much for myself I care. I kin stand purty nigh anything. What I'm thinkin' about boys, is my wife an' my little gal. You see my wife she's consumptive like an' not much fit fer work, an' my little gal, she's only six year old.

So I don't know what's to become of 'em when I'm sent up, an' that'll be mighty soon now, as I'm gettin' well enough to walk."

"Now listen to me a minute," said Tom in a voice as stern as he could make it with the tears that were in it—for the picture presented to his mind of that poor invalid wife and still more of that little six year old girl left to struggle with that mountain poverty and starvation which he knew something about, had touched all that was tender in his nature.

"Now listen to me! I'm going to have a plain talk with you. The only reason you are to go to prison is that you tried your best to kill Ed. Why didn't you think of your wife and little girl before you committed that crime? Answer me honestly now!"

"Well, I will, Tom. You see I ain't much account. I ain't enough account to own a little share in one o' the stills that does a purty poor business up here in the mountings. So I has to live on odd jobs like, an' at best I barely manage to keep a little bread and meat in the mouths of my wife an' little gal an' a calico dress on their backs. No, that ain't edzacly the truth nother, an' as you an' me is talkin' fair an' square now, I don't want to misrepresent nothin'. I'll own up that oncet—just oncet I bought the little gal a

doll down there in town, jest becase she seemed so lonely an' longin' like as she looked at it. It cost me five cents."

By this time all the boys had business with their handkerchiefs, which they felt it necessary to go out of doors to attend to.

After awhile Tom mastered himself sufficiently to say:

"Go on! Tell us why you shot Ed?"

"Well, as I wuz a tellin' you," resumed the mountaineer, "I ain't no account an' so I has to live by odd jobs. Well, when you fellers come up here, the other fellers made up their minds that you must go back, an' so they decided like to have you persecuted till you did go. So, as they didn't want to take the risk of the job theirselves, they come to me an' another feller—that feller what got his arm broke in your camp—"

"Yes, I remember him," said Tom; "go on and tell us all about it."

"Well, they come to us two no 'count fellers, him an' me, an' says, says they, 'ef you two fellers'll do the job we'll see as how you an' your families will have enough, meal an' meat, to last till blackberry time.' You see, we no 'count fellers always looked forrard to blackberry time. Ef we kin pull through till the blackberries is ripe, we're all right for a spell. Well, nuther on us liked the

job, but we didn't see no way out'n it. So he come fust an' twicet. The second time he got too bad hurt like to go on with the job, an' so then I took it up. My pard he had reasoned and argified with you an' you wouldn't listen. So the fellers what was hirin' of me says, says they, 'Bill, you've got to shoot. If you kin drap one o' them fellers without gittin' caught they'll quick enough git out'n the mountings.' That's why I shot Ed. You see yourselves as how I couldn't help it."

All that Tom had tried to tell his comrades about the squalid poverty of the poorer class of mountaineers had made no such impression upon their minds as the prisoner's simple narrative. They were horrified at the destitution which he pictured and shocked at the dullness and perversion of his moral sense, manifested by his confident assumption that they would see that in trying to kill Ed. he had done nothing wrong or unusual. Here was that degradation of mind and soul which frankly regards crime—even including the murder of innocent persons—as a legitimate means of livelihood—like the picking of blackberries—a degradation which nevertheless leaves the soul capable of emotions of affection and tender pity such as this man so manifestly felt for his invalid wife and his "little gal."

Unhappily this degradation, this perversion of the moral sense, is not confined to mountain moonshiners. There is very much of it in our great cities and it is the thing that gives the police force their hardest work. It is also the source of the most serious danger that threatens all of us.

The man had evidently finished with what he had to say, and as for the boys, they had from the first left this man's case in Little Tom's hands. Their throats ached too badly now with a pained pity, for them to make even a suggestion. So Tom took up the conversation.

"Now I want to say something to you," he said, "and I want you to try to understand me. You and I are talking, fair and square, as you said a little while ago, aren't we?"

"That's what we is, Tom," answered the man; "an' whatever you say'll be right, I don't doubt; but you see may be I won't quite understand it, like. I'll do my best. But I ain't got no eddication like. All I know is how to write my name, and may be print a few words on paper. The sergeant major taught me that when I was in the army."

"Then you served in the army?" asked Tom, somewhat eagerly.

"Yes, I was conscripted, but after I was conscripted I thought I mout as well be a good soldier

as a bad one an' so I fought all I could. I never did make it out quite clear in my head what they was a fightin' about, but I says to myself, says I, 'Bill,' says I, 'you're in for this thing an' they's only one thing to do, an' that is fight as hard as you kin on the side yer on.'"

"Well if you were in the army," interposed Tom, "you know what a parole is?"

"Oh, yes, I know that. I had one o' them things oncet. That's how I got out'n the army. I was tooken pris'ner along with a lot of other fellers, an' after talkin' to us a lot, the officers what had us pris'ners sort o' explained the parole business to us, an' after we signed papers promisin' not to fight no more, they let us go home, tellin' us that ef we was caught fightin' agin they'd hang us. Fur a long time I was afraid the conscript officers would ketch me, an' make me fight again, but when one on 'em did ketch me at last he tole me he couldn't make me fight agin, 'cause I was a prisoner on parole. So I know mighty well what a parole means, though at first we all thought it meant a pay-roll an' that we was to be paid for not fightin'."

"Well you understand it better now," said Tom. "You understand that when a man is paroled, he promises not to fight again, and if he does, and is caught at it, he gets shot?"

"Oh, yes, I understand all that now. I was only tellin' you how as I didn't know fust off."

"Well, now that we're 'talking fair and square,' as you say, I want to say that I think you ought to go to state prison for a long term for shooting Ed, and I intended at first to send you there. Perhaps I may do so yet. But now, if Ed will forgive you for shooting him—I'll ask him presently—I'm going to put you on parole, just because of your sick wife and your little girl. You have been in our camp for several weeks now. You know what we are here for. You know that we are not here to bother your friends or to interfere with them in any way."

"Oh, any fool could see that!" exclaimed the man.

"Very well, then. I am going to make you sign a parole and then send you home, but mind, if you violate your parole I'll go down the mountain and bring enough soldiers up here to capture the last one of your gang and send all of you to prison. I know where some of your stills are, and I can find all the others. So you had better keep your parole, and your friends had better let us alone. Are you ready to sign the parole?"

The man rose from the chair on which he was sitting and threw his arms about Tom.

His expressions of gratitude were rude in the

extreme, but at least they were genuine, and he finished in tears as he exclaimed:

"Oh, thank goodness I can go back now an' look after the wife an' little one, an' you kin bet your bottom dollar ef the other fellers makes any trouble fer you fellers, Bill Jones'll be here to help you agin 'em. I'm a goin' to explain things to 'em. I'm agoin' to give it to 'em straight, an' then ef they make trouble fer you, I'll be with you."

Tom drew up the parole and Jones signed it with extraordinary pride in his ability to write his own name in clumsy printing letters, with the "J" turned backwards. But strong man as he was, the tears kept coming into his eyes as he said over and over again:

"You're mighty good to me, Tom! All you fellers is mighty good to me. An' I'm agoin' to teach that little gal o' mine when she says her 'now I lay me' to wind it up with 'God bless Tom an' the other fellers.'"

With that he wiped away his tears with the back of his hand for lack of a handkerchief.

The next morning the mountaineer insisted upon departing in spite of the doctor's assurance that he was not yet well enough to make the journey.

"I must, Doctor," he said. "You see, I don't

know what's happened to my wife an' my little gal while I've been gone."

"Very well," answered the doctor, "only I want to add a promise to your parole. I want you to promise me that if your wounds give you trouble you'll either come here yourself, or if you can't do that, you'll send for me to go to you and dress them." Then seeing that the man was about saying something emotional the doctor quickly added:

"You see, I'm a doctor, and it hurts my pride to have a case that I attend go bad. So if you have any trouble with your hurts you are to come to me or send for me at once."

Then after such rude adieus as the mountaineer could make, he started off up the mountain, the doctor accompanying him a part of the way, upon pretense of wanting to see whether or not he was really fit to walk and carry his gun, which had of course been restored to him. But the doctor had another purpose in view. Just before parting with the mountaineer he took a twenty dollar bill from his pocket and pressed it into the man's hand.

"There!" he said. "Perhaps that will keep meat and bread in your cabin till the blackberries get ripe," and with that he suddenly turned on his heel and rapidly strode back toward the camp,

giving the man no chance to refuse the gift or to thank him for it.

But while the doctor had taken every possible precaution to prevent any of his comrades from seeing what he did, the sentry on the platform saw and reported the facts. So when the doctor returned to camp and set to work with his axe, the boys were quietly discussing a little plan of their own, talking in low tones, as they worked.

That night at supper Jack opened the subject, saying:

"Doctor, we shall be very sorry to part with you, but you have forfeited your right to remain in our camp. You have violated your parole."

"Why, how? What can you mean?" asked the doctor in bewilderment.

"Why, you agreed to be one of us boys, and to 'share and share alike' with us in work and in everything else. Now, this morning you gave that mountaineer some money out of your own pocket, basely trying to conceal the fact from us. Even yet we don't know the amount of your gift. Now, we have unanimously decided not to submit to any such proceeding."

"But my dear Jack," interrupted the doctor—

"But my dear doctor," broke in Jack, "hear me out. What we have decided is to require you to tell us the amount of your benefaction to that

man, so that we may owe you our share of it until we go down the mountain in the spring and collect our money. We are sharing and sharing alike in every thing or nothing, so out with it! How much money did you give the man?"

"But Jack, permit me to explain," said the doctor. "You see, if I gave that fellow any money, it was of my own impulse and without any consultation with you. It was a bit of personal almsgiving in which I have no right to let you share. I did it solely to relieve my own mind, not yours. It wasn't a company transaction at all, and besides I could well afford it inasmuch as by coming up here with you boys and sharing your camp life this winter I have cut off nearly the whole of my personal expenses and am actually saving money."

"Now listen!" said Jack. "We all wanted to give that poor fellow some money with which to feed his wife and little girl 'till blackberries get ripe' next summer, and we should have done so if any of us had had any money. So in relieving your own mind you have relieved ours just as much. We all shared alike in the cost of fitting out this expedition. We have all shared alike in the building of our house and in all the other camp work. We have all shared alike in guard duty, in danger and in everything else, and we're

going to do so to the end of the chapter. So we're going to share alike in this gratuity of yours, our shares to be paid to you as soon as we collect our money down below. So you must tell us how much you gave the man, or else our whole partnership and comradeship will be at an end. Come, doctor, tell us all about it!"

"Well," said the doctor, "I don't think it fair to let you boys share in what was a purely personal bit of almsgiving, done without any sort of consultation with any of you, but as you insist I will say that I gave the man a twenty dollar bill."

"All right," said Tom. "That gives us a chance to impose upon you. It is three dollars and thirty-three and a third cents apiece for us. We'll never pay that third of a cent, doctor, and so you'll be out a cent and two-thirds besides your own share in the gift. That will help to buy another doll for 'the little gal,' and I suppose you won't mind the expense."

"No," said the doctor, "but what can be done to relieve these people's wretchedness and lift them up?"

Not one of the boys could answer the question. Perhaps there was no answer. There often is none to questions of that kind.

CHAPTER XIX

A Stress of Circumstances

THE next few weeks brought nothing of adventure to the boys. Their work went on wonderfully well. They sent down the mountain innumerable ties and all the cordwood that the trees yielded after the ties were cut. They sent down also a large number of great timbers for use in bridge building and the like, but nothing occurred to justify the name of their camp—Camp Venture.

Their firelight conversations were briefer and less spirited than before, because they were working so strenuously now that they were overweary when supper was done, and they went to bed at least an hour earlier than they had done before. The earlier novelty of camping had at last worn out and with it the excitement that tends to keep people awake.

Nevertheless they constituted a happy company, all the more so because their work was producing larger results even than they had antici-

pated. They were sending down the mountain more ties, more cordwood and many more of the high-priced bridge timbers than they had expected to send.

Looking over the accounts one evening in February, when the snow was beginning to melt, Jack said:

"Boys, we've already accomplished more than we expected to do during the whole winter and spring. If we keep it up at the same rate we shall earn quite twice the money we expected to make. So Camp Venture is clearly a success. It is getting so well along in the year now that we need not fear deep snows or avalanches, or anything of that sort to bother us or interfere with our work."

"Nevertheless," said the doctor, returning from an examination of his scientific instruments, "we're in for a snow storm to-night. It is already beginning and so far as my instruments are to be trusted, it is likely to be very heavy, with high winds."

The boys all went out and took a look at the sky. There was as yet no wind of any consequence, but the snow, in fine, dry, meal-like flakes, was coming down in a way that promised a heavy fall.

About nine o'clock the boys went to bed—all

but Harry Ridsdale, who stayed outside as the sentry. About ten o'clock the wind rose to a gale and the roaring of it awakened the doctor, who instantly arose and with a brand from the fire place to serve as a torch, went out to consult his instruments. When he returned his stamping and brushing off of snow aroused the others, and the howling of the tempest brought them all into a very wide-awake condition.

"I say, boys," said the doctor, throwing the brand he had carried into the fire again, "this is an awful night. The snow is coming down in blankets, the wind is blowing at a rate which is between a whole gale and a hurricane, and of course the snow is drifting terribly."

"All right," said Jack. Then he went to the door and called,—"Come in here, Harry! We shall have no use for pickets to-night."

In answer to some questions he said:

"No mountaineer is going to prowl about the hills in such a storm as this. If he did he would be smothered in a snow drift before he got a hundred yards from his cabin door. We're perfectly safe for this night without a sentry, so we'll all crawl into our bunks and go to sleep."

The soundness of Jack's opinion was obvious enough, and so no more sentries were posted that night. The fire was reinforced with some big

logs and all Camp Venture ventured for once to go to sleep.

The hours passed on. The wind howled more and more fiercely, and but for the solidity of its thick log walls the house would have shaken in a way to wake the heaviest sleeper. As it was the boys slept on undisturbed. Finally the fire burned low, so that it gave very little light in the cabin. Little Tom waked and feeling no need for further sleep he got up and piled on some additional logs. Then he went back to bed, but somehow his eyes would not close again. The other boys also waked up, and, turn over as they might, could not go to sleep again. Finally Harry, seeing that all were awake, called out:

"I say, fellows, let's get up and have some breakfast. I for one am hungry."

"So am I," answered Jack, springing out of bed.

"So say we all of us," responded Tom. "By the way, what time is it?"

Harry fumbled among the doctor's belongings and looked at that gentleman's watch.

"Doctor, you forgot to wind your watch last night. It has run down at a quarter past nine."

"No, I didn't," answered the doctor, leaping out of bed, where he had lazily lingered for a time. "I certainly wound it before I went to bed."

With that he went across the cabin, took the watch, looked at it, and then put it to his ear.

"It's running all right," he presently said, whereupon the other two members of the company who had watches brought them out.

All pointed to a quarter past nine.

Just then Jack opened the door and something like half a ton of snow fell into the house, but no light came with it.

"Boys!" he cried, "we're utterly snowed in. It is a quarter past nine in the morning, but the house is completely buried in snow! You see there is no light coming in even through the loosely laid roof, while the doctor's windows are as black as midnight. Yet by looking up the chimney you can see daylight plainly. The fire has kept that open."

"Can there have been twenty odd feet of snowfall in a single night?" asked Harry in astonishment.

"No, certainly not," answered the doctor. "We're caught in a snow drift, that's all. You see with the fearful gale that has been blowing all night the snow has drifted greatly and now that I think of it, our house is peculiarly well situated to be caught in a drift."

"How so, Doctor?"

"Why, the wind has been from the north northwest, or very nearly north. Our house stands on a plateau on the northerly side of the mountain. Less than a hundred feet south of it, rises a high cliff. That, of course, catches all the snow that comes on a north, north-west wind. Then again the house itself is an obstruction, catching and holding all the snow that strikes it. The snow storm has been a tremendous one, probably a three-foot fall, and we are caught under all of it that ought to have been scattered over several miles of mountainside."

"Let's postpone the explanations, fellows," broke in Tom, who always devoted himself to the practical, "and give our attention for the present to the problem of What to Do Now. That is after all the thing to think about in every case of emergency, and this is a case of emergency if ever there was one."

"How do you mean, Tom?" asked Jim Chenowith.

"Why, in the first place, we have less than a quarter of a cord of wood in the cabin, and, after such a storm, it is likely to turn very cold. So we must first of all dig a passage-way to one of our wood piles, or else we must freeze to death. We can't get to the spring, of course, and if we

did, it would be frozen up. But we can get all the water we need by melting snow. The worst of our problems is that of a food supply."

"That's so," said Jack, in something like consternation. "We haven't a pound of fresh meat on hand and I remember that you, Tom, intended to go out with your gun to-day to get some. We have eaten up all our hams and bacon, and we haven't anything left except the coffee, two small pieces of salt pork, some corn meal and the beans."

"That means," said Tom, "that we've got to dig our way out of here in a hurry, and we haven't a shovel in the camp."

"No," said Jack, "but we've got a pile of left-over clapboards over there in the corner, and we can soon make some snow shovels. Let's get to work at that."

After a breakfast on corn pones—for the pork must be saved for use with the beans—the boys set to work to manufacture rude shovels that would do as implements with which to handle snow. For handles they used such round sticks as they found in their meagre supply of fire wood.

In half an hour the whole company of boys were armed for an attack upon the snow drift. In the meantime Tom had thought out methods.

"First of all," he explained, "we must attack the snow directly in front of the door, and work

our way to the top of the drift. We must shovel that snow into the house, because we haven't any where else to put it. We'll put on all the kettles we have and reduce as much as we can of the housed snow to water for use in drinking, cooking, washing and so forth. When we break through to the top, we can shovel the snow to the right and left till we open a passageway to the wood pile."

"It's going to be mighty hard work," said Ed, "for the snow is so soft that we'll sink up to our waists in it."

"Yes," answered Harry, "but light snow like that will be easier to handle than if it had settled and frozen."

With that the boys set to work to break a passage from the door to the top of the snow drift. When they had accomplished that they found, to their sorrow, that it was still snowing heavily, a fact which threatened to undo much of their work after it was done. Still the snow was dry and light, and standing up to their waists in it, they shovelled it to right and left, making a passageway through it that led towards their nearest wood supply. They did not pause for a midday meal, and yet when night came they had not reached the wood pile, while the snow continued to fall as heavily as ever. Fortunately the high

wind had gone down, so that no more great drifts were blown into their trench.

They had not tried to dig to the ground in making their passageway. They had simply created an upward incline from the door of their house to the top of the drift, and then dug a sort of inclined trench towards the wood pile.

"Now I say, fellows," said Jack, as they left off work to get such supper as they could, "we've got to keep this thing up all night. We have barely wood enough left to get supper and breakfast with, and we simply *must* get to that wood pile by morning. Of course we can't all work all night; we must have some sleep; so I propose that we divide the company into three shifts of two boys each, one shift to keep up the work of shovelling while the others sleep. We'll let each shift work for an hour and then wake up the next shift to take its place. That will let every fellow have two hours' sleep between his one hour spells of work."

The plan seemed in all respects the best that could be devised. Three sticks of wood were all that now remained in the cabin and it was decided not to burn any of these during the night, but to save them for use in cooking breakfast in the morning. Breakfast, it was agreed, should consist of a kettle of corn meal mush, with two slices

of salt pork and a pint of coffee to each member of the party. The boys would have foregone the pork, saving it for a worse emergency, but the doctor advised against that course.

"With so much work to do," he said, "we shall need the strength that comes from meat."

"And besides," said Tom, "this snow will pack down pretty soon and freeze over with a crust hard enough to bear a man. As soon as that happens I am going out to get some game."

The night's work was awkwardly pursued, owing to the darkness, which was rendered intense by the continued and very heavy snow fall. But while they had not reached the wood pile by daylight, they were nearing it and in fact believed themselves to be almost over it—for they had made their trench a shallow one, in order to hasten their advance. So, when the working shift was called to breakfast, Harry reported:

"We're almost over the wood pile. After breakfast, when we all get to work, we'll soon make a sloping path down to it. As it is still snowing, without a sign of quitting, I move that when we reach the wood, we all set to work to bring a houseful of it in here, against emergencies."

"That's our best plan," said the doctor. "If

we are destined to live on starvation rations and it should turn very cold, as is likely, we must have artificial heat to replace that which a full supply of food would make. A starving man practically freezes to death. So the first thing is to bring into our cabin as large a supply of wood as it will hold. Luckily we have plenty of it. There are twenty cords at least in that first pile."

With that the boys set to work on their scant breakfast of coffee, mush and salt pork.

CHAPTER XX

In Perilous Plight

AFTER breakfast the boys began again the snow digging for their wood pile. They had somewhat miscalculated its locality, and so when they reached the ground with their descending path, the wood pile was not there. Nor could they easily correct their reckoning until little Tom came to the rescue with his keen eyes and his alert intelligence. Climbing to the top of the snow drift and standing, hips deep in the soft snow, he studied the trees round about, or so much of them as protruded above the snow. It was Tom's excellent habit to observe things closely, even when there was no apparent occasion to observe them at all, and he had observed that one of the trees between which the wood had been ranked up had a peculiar knot on it about thirty feet from the ground, caused by some injury received while yet it was young. So he looked for that tree. The snow had so changed the aspect of the landscape that all its recognizable features

had disappeared, but Tom remembered that peculiar knot and eagerly looked out for it. Presently he discovered it, in spite of the fact that a mass of snow that had collected on top of it seriously impaired its proportions. Instantly he called out directions to the boys to carry their pathway south toward the tree in question.

"But we're already south of the wood pile," said Harry. "Your plan will take us directly away from it. It is north of here, I tell you."

"All right," answered Tom. "I know where the wood pile is, and if I am wrong I'll do all the rest of the digging myself. Only if you'll dig in the direction I tell you, you'll come to it in about forty feet."

So confused were the geographical perceptions of all the boys, and so confident were they that Tom was wrong, that they made earnest protest against digging in the direction indicated by him. But his insistence was so resolute, and their faith in his sagacity was so strong, that after making their protest they yielded and pushed the snow excavation in the direction he had indicated. An hour's digging brought as its reward the discovery of the wood pile, and instantly every fellow set to work to carry wood into the house over the very imperfect pathway, which was being every hour rendered less and less passable by the con-

tinuing snow fall. By working hard, however, they managed to fill all the spare space in the house with wood and to pile five or six cords more around the doorway.

As they used about half a cord a day in ordinary winter weather, and from a cord and a half to two cords a day when the thermometer sank low, this was not a large supply. But at least it would ward off the present danger of freezing, and now that the way was open to the wood pile, and could be kept open by a little shovelling now and then, they could get more from time to time, as they might need it.

It was past nightfall when this work was completed. The boys had not stopped for a midday dinner, but Ed., with the foresight of an accomplished cook, had put a kettle of beans on to boil about midday, with just enough pork in it to give the beans a relish, and when night came he dished up the meal.

"There's no bread, boys," he said, "because we can't afford two dishes at one meal now. But you remember the doctor told us that beans are bread as well as meat, and so that's all I have provided."

After supper the boys were very tired from their hard day's work, and yet they were disposed to talk, and at any rate it would not do to go to

bed until their supper of boiled pork and beans should have had time to digest.

"If this snow continues," said Ed., "we fellows will pretty soon have to take our beans without the pork. I have a little of that bacon dripping left and I'll use that while it lasts. But unless we get some sort of supplies within three days we shall be out of meal."

"Are we so near the end as that?" asked Jack.

"Yes. We have nothing left now except two small pieces of salt pork, about twenty pounds of corn meal, and the beans. The pork and the meal won't last us more than two or three days, and as for the beans, well, we have less than half a peck of them left."

This announcement was received with something like consternation.

"We're nearing the starving point," said Jack. "We must recognize the fact and put ourselves at once upon starvation diet. I move that the Doctor take charge of such provisions as are left to us, with full power, to dole them out in the best way to keep life in us till the conditions change."

"Good!" cried all the boys in chorus, and so the motion was carried.

"If worse comes to worst," said Tom, "I'll take my gun, break my way out of here, and kill

something fit to eat, at whatever risk. The game of every sort is starving now as well as we are. The turkeys, deer, rabbits and all the rest of them will be out on the mountains hunting for something to eat on those spots that the wind has blown clear of snow. It will be curious if I don't get some of them."

"We'll permit nothing of the kind," said Jack, "till the snow stops and freezing weather makes a crust upon it. To go out now would simply mean suicide. You wouldn't live to get out of this snow-drift, and if you did, you'd perish in the next one, Tom."

"Probably," answered Tom, in a meditative voice. "But I'd rather die that way, in an effort to save the whole company than stay here and starve like a rat in a hole."

"But," broke in the Doctor, "we are not yet starving. We are hungry, of course, having had an insufficient supply of food to-day. And we'll be hungrier to-morrow, and still hungrier next day. But as I reckon it we have food enough, at least to keep life in our bodies for three or four days to come if we hoard it carefully and eat only so much as is necessary to sustain life. By that time the weather will have changed in some way, and we shall have found some means of supplying ourselves."

So it was decided that Tom should not court death by attempting to go out upon the mountain under existing conditions.

"By the way, Doctor," asked Ed, "what are your weather predictions?"

"I can't make any," answered the Doctor. "It is still snowing hard ; the barometer is low ; the wind, which amounts to nothing, has shifted to the south-west—a bad quarter, suggesting more snow—and so far as I can see there is no promise of severe cold weather, which is what we most want now."

In this melancholy plight the boys went to bed, and, thanks to their high health and extreme weariness, they slept soundly.

CHAPTER XXI

An Enemy to the Rescue

THE plan had been to set to work next morning to dig the house out of the snow; that is to say, to dig away a space around the cabin. But the Doctor forbade it.

"The more force we expend in work," he said, "the more food we must have, and as we have pretty nearly no food now, we absolutely mustn't expend any force unnecessarily. We must simply rest to-day, doing no more shoveling than is necessary to open a little larger area around the door, and to keep our path to the wood pile open."

That day, the next and the next were passed in idleness and with growing hunger. The snow ceased for a time on the second day, but the severe cold weather which alone could release the boys from their terrible plight, did not come. On the third day, the snow began to fall again in a pitiless and discouraging way, and by that time the food supply had run so low that the Doctor's

dole of it was too small even to ward off the severe pangs of hunger.

Tom said that night: "Boys, I don't care what the consequences are, I'm going to break out of this to-morrow morning or perish in the attempt. I'd rather die in a snow bank, fighting for a chance, than sit here and slowly starve to death. My strength is already waning, and before it goes altogether I'm going to make an effort to get some food. If I wait longer I sha'n't have either the strength or the courage to go at all."

This time nobody interposed an objection, but foreseeing Tom's need, and knowing that he would accept nothing not shared equally by the others, the Doctor deliberately dealt out a larger supply of beans than usual that night. The meal was all gone. The pork had been eaten up, and after the Doctor gave out this supper, which it would take till eleven or twelve o'clock at night to cook, there was left only about two quarts of beans in the camp, and absolutely not an ounce of food of any other kind.

In ordinary circumstances, if the boys had been thus shut up in their cabin and deprived of physical activity, they would have held long talks and learned much. Especially they would have beset the Doctor with questions, the answers to which would have interested them. But now they were

too hungry for material food, too starved of body and far too depressed in mind to care for conversation of any kind. They simply sat still and starved, in gloomy silence, and under the terrible oppression of hopelessness and helplessness. All but Little Tom. His courage survived, and as he sat before the fire waiting for the beans to cook, he was resolutely planning ways and means by which, if possible, to make the morrow's expedition successful. The chances, he knew, were a hundred to one against him, and he was trying, by the exercise of a careful foresight, to bring that one chance in a hundred within his grasp.

Presently he took off his boots and drove the heaviest nails there were in the camp into their heels, letting the heads protrude more than a quarter of an inch below the surface.

"What's that for, Tom?" asked Jack, in listless fashion.

"To keep me from slipping," Tom answered, "in climbing over rocks with snow or ice on them."

"But you're not really going to try this thing to-morrow, are you? It will be madness to attempt it."

"Probably," answered Tom. "But madness or sanity I'm going to make the attempt. I don't see anything particularly sane in staying here in

camp and trusting to a quart or two of beans to keep life in six already starved boys. I'd rather die trying than sitting still. So I'm going to start at daylight."

There was no use in arguing, particularly as the argument was manifestly all on Tom's side. So all the boys remained silent.

"I'm going to take two guns," said Tom, presently, "the rifle and a shot gun, so as to lose no chance of any game, big or little. I'll pretty certainly lose one of the guns before I get back if I ever get back at all."

Nobody said anything in reply. Tom's remark had been addressed to nobody in particular. Indeed it was rather a reflection out loud than a remark.

Then Tom proceeded to get his ammunition belt ready. The rifle was already loaded in its magazine, with fourteen cartridges. For the shot gun, Tom put into his belt, twenty cartridges loaded with nine buckshot each, and twenty that carried turkey shot—these last for game smaller than deer.

"I'll kill anything I see," he said, presently, "from a skunk to a big buck deer. We are hungry enough now to eat any sort of meat that may come to our hand."

Just then a noise was heard on the snow-cov-

ered roof—a noise as of scratching and slipping. Nobody heard it but Tom, but his senses were already in that condition of alertness which the morrow's work would require for its success. So, without saying anything to his comrades, Tom took the rifle, opened the door, and went out to see what the matter might be. He reflected as he did so, that it was probably only some slipping of the snow and ice upon the clapboards, but at any rate he wanted to see for himself the cause of it.

A few minutes later the boys inside the hut were startled by two cracks of a rifle and a heavy fall, just in front of the door. They seized their guns and rushed out, stumbling over something at the door as they did so.

"Look out there!" called Tom, eagerly; "don't risk a blow from his claws yet. He may have life in him still. Let me give him one more bullet to make sure."

With that Tom advanced and fired once more into the carcass of the large black bear that he had already killed.

"It's pretty hard, isn't it?" said Tom.

"What is?" asked the Doctor.

"Why, to shoot a friend that had come to our rescue as that fellow did."

"I don't understand."

"Oh, yes you do, or at least you ought to," answered Tom, in whom the long continued, but now released, nervous strain, had wrought an irritable mood. "Don't you see that fellow came here just in time to rescue us from starvation—for I had hardly a hope of getting back with any game from to-morrow's expedition—and he brought a huge supply of bear's meat with him, under his skin. By the way, boys, skin him carefully, as his hide will be a valuable addition to my collection of pelts. I have the painter's coat, a deer's hide, the skins of several raccoons and opossums, thirty or forty squirrel and hare skins, and now this bear's thick overcoat will greatly increase the value of my collection. Skin him carefully, but quickly, for we're going to have a dinner of bear beef before we go to bed, and we'll eat bear beef to our hearts' content till the weather releases us from our prison. I'm not going out for game to-morrow."

CHAPTER XXII

All Night Work

THE bear was dragged into the cabin. Jack picked out a bent stick of round wood, and with an axe quickly sharpened its ends into points, making of it a " gambrel " stick, about two and a half feet long. Inserting its sharpened ends under the big tendons of the animal's hind legs, he had him ready to hang up for dressing. Meantime, another of the boys had driven another stick in between two of the upper logs of the cabin, letting its end protrude a foot or two into the cabin. Four of the boys seized the bear, which weighed not much less than two hundred pounds, and after some exertion succeeded in hanging it, head downwards, upon this stick. Then, with sharp knives, they set to work to skin it.

" Oh stop ! " cried Ed. " I know a better plan than that. If you wait to skin the bear, we sha'n't get any meat to eat before morning, Treat him as a butcher treats a deer or calf.

Cut him open, and give me the heart, liver and kidneys to cook, and you can skin him afterwards just as well as before. In the meantime I'll be getting supper."

The boys were much too nearly famished to dispute over any suggestion that promised to hurry meal time, so they did at once what Ed had bidden them do. They ripped the animal open, removed the viscera, detached the heart, liver and kidneys, and delivered them into Ed's hands.

Ed washed them and cut them into small bits, discarding the gristle-like linings of the heart. Then he put the whole mass into the kettle in which the beans were cooking, adding a goodly piece of the bear's fat and a pint or two of water.

"It'll be a new dish," he muttered to himself—"'bear giblets and beans'. But if I'm not mistaken nobody in this company will hesitate to eat of it."

"I say, fellows," he called out presently, "save every ounce of that fat! We'll need it for cooking purposes if ever we get anything besides bear beef to cook."

"By the way, Tom," said Jack, as he worked at the task of skinning the bear, "how did this fellow come to be prowling around our cabin?"

"He was hungry, like the rest of us," answered Tom. "The snow has cut off his customary sources of supply, so he set out, precisely as I intended to do in the morning, to find something to eat. Bears always do that when the snow is heavy. They have often gone down, in hard winters, to the Piedmont region—sometimes as far as Amelia or Powhatan county. They are searching for something to eat—corn in a crib if they can get at it, or pork in a barrel, or a robust boy if they can't get anything better. This fellow was hunting for anything he could find, and, unluckily for him, he found me, with my rifle. What a splendid gun that is, by the way, Doctor! Every shot I fired at the big beast went right through him and hurtled off into the air beyond."

"That's the nitro powder," said the Doctor.

"By which you mean—what?" asked Tom.

"Why, nitro powder is smokeless powder. It is mainly composed of nitro-glycerine, and it has an explosive force many times greater than that of ordinary gunpowder. That is what gives to the guns that are loaded with it so much greater a range than ordinary guns have. You see, it starts the bullet with a vastly greater velocity than that of a bullet propelled by the explosion of ordinary gunpowder, and so the missile goes very

much faster, with very much more force, and in a much straighter line, and the gun is more accurate and greatly deadlier in its aim."

"Well, now I want to say," interrupted Ed, "that I've got a supper ready which will go to the spot with a much surer aim than any bullet ever did in the world."

The boys responded instantly, as a matter of course. They were literally starving, or so nearly so, that they afterwards confessed that they had had great difficulty in resisting the temptation, while skinning the bear, to cut off mouthfuls of the meat and consume it raw.

There was, of course, no criticism, therefore, upon Ed's new dish of "bear giblets and beans," and not until the last morsel of it was consumed, did any boy in the party relinquish his assiduous attention to it.

"Now," said Jack, "we can go to work again. To-morrow, we'll dig the house out of the snowdrift any how."

"Yes," said Tom, "and as I needn't go hunting now, I'll help in that. The snow has settled a good deal by its own weight now and it will settle a good deal more before morning."

"Why?" asked Ed.

"Because it is raining," said Tom, "and nothing settles snow like a drizzling rain."

"It is now two o'clock," said Jack, "and I for one am going to bed."

"Better sit up for half an hour longer," said the Doctor.

"Why?" asked Jack.

"Because our stomachs are full. They have been seriously weakened by several days of starvation, and are apt to do their work rather badly for a time. Let's give them a chance."

"But, Doctor," said Jack, "I have noticed that all the animals lie down and sleep as soon as they have fed heartily. Why isn't it a good thing for men to do the same thing? Men are after all, animals on one side of their nature."

"Yes, I know," said the Doctor, "and I have known physicians to argue in that way in favor of late suppers. But experience hardly bears out the argument. A man may sleep well on a heavy meal, but often he gets up with a bad taste in his mouth and with a morbid craving for food, which means that he hasn't properly assimilated the food that he has already eaten."

"What do you mean by 'assimilating' food?" asked Tom, adding: "I'm afraid you'll think me very ignorant."

"Not at all," replied the Doctor. "Most people don't understand that. You see, there are two distinct processes by which we turn food to

account in building up our bodies, making strength and heat, and generally carrying on the processes of life. One of those processes is digestion, and the other assimilation. Digestion simply reduces the food which we have eaten to a condition in which it can be assimilated. By assimilation certain organs of the body take up the food thus prepared for them, convert it into blood and send it through the system to nourish it. In the passage of the blood through the arteries and veins, it leaves deposits of muscle here, fat there, bone in another place, and so on. This is a very rude statement of the matter, but it is sufficient to show you what I mean, at least in a general way. Very well. It does a man no good whatever to digest his food if he doesn't assimilate it. No matter how perfectly the stomach does its work, the body is not nourished unless the organs charged with the function of assimilating the digested food do theirs also. Once, in a hospital, I saw a little baby die of actual starvation, although it had an abundance of food, and digested it perfectly. It simply could not assimilate."

"But what has that to do with our going to bed at two o'clock in the morning?" asked Jack, who was disposed to be a trifle cross as the result of the long starvation and strain.

"Only this," answered the Doctor, "that unless we give our weakened stomachs a little chance to digest our food properly before we go to sleep, the process of assimilation will be very imperfectly performed and we shall not be as perfectly nourished as we need to be. Still, I think we might safely go to bed now," added the Doctor, "as the half hour is gone, and it is now two thirty"—looking at his watch.

With that the exhausted company prepared for bed. Jim Chenowith was the first to approach the bunks, under which the earthen floor was a little lower than in the rest of the cabin. As he did so, having slipped off his boots, Jim called out:

"Hello! What's this? I say, fellows, we have a creek here under our beds!"

A hasty examination confirmed his statement. There was a vigorous stream of water running directly under the bunks, and worse still, as an exploration with torches soon revealed, the water was not only running in under the lower logs of the hut, but was also pouring through every opening it could find in the chinking of the walls above, and streaming into the bunks.

The Doctor hastily went outside to study conditions and, returning, said:

"There's a terrific rain on, boys, and the ther-

mometer stands at fifty. So the snow is melting rapidly, and the two things together—the rain and the melting snow drift—are flooding us."

Tired and sleepy as Jack was, he rose instantly to the occasion.

"There's no sleep for us to-night, boys!" he said. "We must go to work at once and dig the house out of the snow drift. Get some fatwood torches ready and let's go to work."

The boys responded quickly, and presently all of them except Ed, whom the Doctor forbade to do any further work that involved strenuous physical exertion, were engaged in shoveling the snow away from the house and opening a passageway around it fully eight feet wide.

By daylight this was accomplished. It put an end to the inflow of water through the chinking of the upper logs; but, as Tom expressed it, there was still "a young river" flowing into the house, from the bottom of the snow bank, underneath the lower logs of the hut. Not only was all the warm rain flowing through the snow bank, but in its passage it was dissolving a great deal of the snow, and so the volume of water flowing out at the bottom and running into the house was quite double that which the rain itself would have supplied.

"We ought to have made a bank of earth

around the lower part of the cabin," said the Doctor, after studying the situation for a time.

"True," said Jack, "but we had no tools with which to do it. Neither have we any now. So I don't see what is to be done."

"I do!" said Tom, the alert of mind. "I do, and it is perfectly simple."

"What's your idea, Tom?" asked Jack.

"Why, to make the snow protect us against itself."

"But how?"

"Why, by building a little snow bank between the big snow bank and the house, hammering it into solid ice, with our mauls, and in that way making a ditch that will carry off the water around the end of the house and down over the cliff."

"That's a superb idea, Tom," said Jack, "and we'll get to work at it at once. I'd give the proceeds of all my winter's work for a head half as good as yours, Tom."

"Oh, pshaw!" said Tom. "My head isn't of much account. It is only that I look straight at things and try to use common sense."

"Yes," said the Doctor, "and that is what we call 'genius' in science. It is the men who 'look straight at things and try to use common sense' who do the great things in science. Darwin did

that, and so did Asa Gray, and Edison, and Agassiz, and all the rest of them. Scientific genius is nothing in the world but common sense, reinforced by a habit of observation."

But there was no further time for talk. The boys quickly built a low snow embankment between their house and the great snow drift, and beat it down with their mauls, into a condition of solid ice. With this barrier to aid them they succeeded in compelling the water from the rain and the melting snow to flow in a sort of ditch around their house, and to cease flowing through it.

Inside, however, the condition of things was deplorable. The earthen floor under the bunks was a mud hole. The broom straw that constituted the beds was soaking wet, and the task of drying it promised to be no easy one.

"We've simply got to sleep on hard clapboards for two or three nights," said Ed.

"Well, what of that?" asked Tom, "I've often slept on much harder beds than clapboards make."

"For example?" asked Jim.

"Well, I've slept on big rocks for one thing."

"Why did you do that? Why didn't you sleep on the softer ground?"

"Because the softer ground was much too soft,

being mud. I've slept on two rails placed about eight inches apart, with one end stuck into a fence so as to keep me out of the mud, and a pretty good bed rails make. Finally, I have slept on the worst bed there is in the world."

"What is that?"

"Why, a pile of pebbles. That's the very worst there is, but you can sleep on it, if you've got to. Now, let's have some breakfast, Ed, and after devouring a proper quantity of bear steak, I'll show you fellows how a healthy fellow who has worked all night can sleep on clapboards in spite of the daylight that the Doctor's rag windows are letting in, now that we've shoveled the snow away from them."

Ed had breakfast already well under way. It was to consist solely of bear steak and coffee, for coffee was their one supply which was not exhausted, and during the starving time they would hardly have endured their hunger but for that resource.

"But," said Jack, as they ate their breakfast, "what are we going to do with that bear meat? It won't keep long in this soft weather. By the way, Jim, throw another stick on the fire. It's cold."

"So it is," said the Doctor, who had just come in after a consultation with his scientific instru-

ments. "The thermometer has sunk twenty degrees within the last hour, and stands now at two degrees below freezing. It will go much lower, for the barometer is rising and the wind has shifted to the north-west. We're in for a trip to the Arctic regions without doing any traveling to get there."

"Let's hang the bear out of doors, then," said Jack. "It will freeze there."

"Yes, and every carnivorous animal in these woods will come and eat for us," said Tom, whose authority on the habits of wild creatures was accepted by all the boys as final.

"Besides," said the doctor, "it isn't necessary. "Our bear will freeze hanging just where he is, by the door there."

With that he arose, went outside, and brought in a thermometer, which he pinned to the bear's carcass.

"We're down to twenty-six degrees outside now," he said, "and it is growing steadily colder." Then, after waiting for five minutes, he consulted the thermometer that he had hung upon the bear, and announced:

"It stands at thirty-three degrees—fruit-house temperature."

"What do you mean by 'fruit-house temperature?'" asked Tom.

"Why, don't you know? The houses in which fresh fruits of the summer are preserved for winter use are kept always at a temperature of thirty-three degrees. If the temperature were higher than that, the fruits would ferment and decay. If it were a single degree lower they would freeze—for thirty-two degrees is the freezing point. But at a temperature of thirty-three degrees nothing decays and nothing freezes. So they keep the fruit houses always at that temperature, and they keep fresh strawberries and peaches and all the rest of the fruits all winter in nearly as good condition as when they were picked."

"Well, what do they do with a boy," asked Tom, "who has worked all night and is mightily sleepy, except let him go to bed, even if it is the usual time for going to work, instead? Good morning, and pleasant dreams to all of you."

With that Tom rolled himself up in his blanket and lay down upon the clapboard flooring of his bed, taking a stick of wood with him for a pillow. The rest immediately followed his example and in spite of adverse conditions, they were all presently sound asleep.

CHAPTER XXIII

A Loan Negotiated

"ZERO weather, boys, and below," called the Doctor, who was first to wake, about four o'clock that afternoon, and who, before waking the others, had gone out to inspect his weather recording instruments. "The bear hanging here by the door is frozen hard, and so is all the water in the house. So all that want a bath will have to join me in a roll in the snow out there."

With that he shed the scant clothing that he had on him and, rushing out, plunged into a snow bank. The rest, determined not to be outdone in robustness, quickly followed him, and after a vigorous rubbing with their coarse towels, they felt like entirely new persons.

"How glad our friends will be," said Tom, "when they hear that each of us is 'another fellow.'"

"That's an old joke, Tom," responded Ed.

"Yes, to other people, perhaps, but not to this

crew of new people, every one of whom has proclaimed himself 'a new man' after that snow bath."

"Now, we can accomplish something," said Jack. "The rain and natural settling have reduced the depth of snow out there where we're chopping to two or three feet, and in this weather the surface of it will be as hard as ice itself. So we'll all drive nails in our heels to-night, as Tom has done with his, and early to-morrow we'll set to work again with the axes."

Ed was already broiling some slices of juicy bear beef, and had a big pot of coffee ready for use. As they ate supper, Harry said:

"This bear beef is delicious, of course, but I would give something pretty if I had an ash cake or a pone of bread to go with it. It may be true that a healthy person can live on meat alone for a good while, but it is a good deal more comfortable to have some bread with it."

"And it is more wholesome, too," said the Doctor. "Man was made to eat a mixed diet, and it isn't well for him to live too long on meat without starchy food, or starchy food without meat. I'm going to observe the effects of this exclusively meat diet on all of us very closely."

"Any how," said Jack, "the Indians, when they go on their big hunting trips or on the war-

path, used to live on meat alone for weeks and months at a time. So I don't think we'll starve while our bear lasts, and before it is gone we can depend on Tom to provide something else. Now that the snow is hard, Tom will go prowling about the mountains before many days pass."

"Oh, we shan't starve," said the Doctor. "But it has been a good many days now since we had any bread, and we are all beginning to feel the need of it. The beans we had with our bear giblet stew were a very imperfect substitute for bread, and the quart or so of beans that we have left are not to be used at all so long as we keep fairly well. I'm saving them for hospital diet. How the doctors in the hospitals would laugh at the suggestion of a bean diet in illness! And yet we may have to come to that for lack of any other starchy food."

"What is it you fear, Doctor?" asked Jack.

"Why, I fear that an exclusive diet of meat may result in some sort of inflammation or other disturbance of the digestive organs. If that happens, even a few beans, boiled without meat, may save a life. At any rate, I am going to keep the beans for such an emergency."

All this while Tom was taking no part in the conversation. Tom was thinking—"looking straight at things and using common sense."

Presently, he took his gun and went out to "take a look at the situation," he said. On his return, he reported that "everything is frozen as hard as a brick, and if the moonshiners ever intend to attack us, now is their time. We must put out a sentinel at once. As I want to think a little I'll take the first turn, and the rest of you fellows can arrange as you like for the other turns."

"One thing I want to suggest," broke in the Doctor. "The cold is intense. The thermometer is considerably below zero. It will be cruel to keep any boy on guard outside for any prolonged time. So I propose that while this weather lasts we run the guard duty in half hour shifts. That will give each boy half an hour out there in the cold, and two hours and a half in which to sleep and get warm before he has to go on duty again."

"It's an excellent idea," said Jack, "and we'll arrange it so."

"All right," said Tom, "only as I am taking the first and best turn, I'll stay out for an hour."

The fact was, though Tom did not mention it, that the boy wanted a full hour in which to think out some plans that he had vaguely conceived. It was always Tom's habit to try to better the conditions in which he was placed, instead of accepting them as inevitable. Whenever any-

thing was wrong and uncomfortable, Tom began asking himself if there might not be some way in which he could make it right and comfortable. He could endure hardship with a plucky resolution that often astonished others; but he never endured hardship without giving all his energies to the task of ridding himself of it if that were possible. It was a familiar saying among those who knew him that "Little Tom Ridsdale never will admit that he is beaten, and so at last he never is beaten."

As Tom paced up and down the platform, stamping his feet and clapping his hands against his sides to keep them from freezing, the Doctor came out with a burning brand to consult his weather instruments. When he had done, Tom called to him, saying:

"Would you mind coming up here for a minute or two, Doctor?"

"No, certainly not," answered the Doctor. "Do you want to go in and warm yourself?"

"No; oh, no," answered Tom, quickly. "I only want to consult you a little."

The Doctor mounted the platform, and after some hesitation, Tom asked:

"Do you happen to have any more money in your pockets, doctor?"

"Yes, of course. I always keep a little money with me."

"Would you mind lending me two dollars in the common interest of the company, I giving you an order on our paymaster down below for that amount, to be paid to you out of my share when we collect?"

"Yes," answered the Doctor. "I would mind that very much. In fact, I positively decline to lend you any money on any such terms, Tom. But if you want some money, be it two dollars, or ten, simply as from one friend to another, and without any 'orders' on paymasters, you can have it."

Tom understood, and he did not contest the point. He pressed the Doctor's hand and said:

"Well, then, let me have two dollars, please?"

"Make it five," said the Doctor.

"No," answered Tom. "Two dollars will be quite enough. Somebody in the mountains might murder me for five dollars. And, besides, nobody up there could change the bill. So, if you will let me have two one dollar bills I shall be grateful."

"What are you going to do, Tom? Nothing rash, I hope."

"I don't know yet what I'm going to do," an-

swered Tom. "And please don't say anything to the other boys about it. I'll be gone from here when they get up in the morning. Maybe I'll bring back some game. You see that bear won't last very long with six hearty men eating three meals a day off it, with no other food to help fill up."

The Doctor saw that Tom did not want to talk of his plans—it was always Tom's way to keep such things to himself—and so he asked no more questions, but went to the doorway for light, selected two one dollar bills, and returning, placed them in Tom's hand. Then Tom said:

"Now, Doctor, you fellows are not to worry about me if I don't turn up when you expect me. I shall probably be away from camp for several days—may be a week, or possibly even more than that. Don't worry, in any case. Remember that I know how to take care of myself."

The Doctor promised, but it was with much of apprehension in his mind. He saw that Tom was looking forward to his projected expedition with a good deal less of confident hope than he usually manifested on such occasions, and he gravely feared that the boy was planning to take some serious, if not even desperate, risk. He knew that Tom was daring to a fault, and that when

he had formed a purpose he pursued it to its ultimate accomplishment or failure, with no regard whatever to the risks run, except that prudent forethought and circumspection which might enable him to avoid threatened evils.

CHAPTER XXIV

In the High Mountains

TOM'S second tour of guard duty ended at four o'clock in the morning, and he woke the Doctor to succeed him. Then, without attracting the other boys' attention, he rolled his blanket into a compact bundle and strapped it high upon his shoulders. He next loaded his cartridge belt with twenty buckshot cartridges on one side and twenty cartridges that carried turkey shot on the other. He put a box of matches into one pocket and two thick slices of bear beef into another. Finally, he took one of the empty meal bags, carefully folded it up and thrust it into the breast of his hunting shirt.

Thus equipped he sallied out, and bidding the Doctor good morning as he passed the picket post, started off up the mountain. He had to pick his way very carefully till daylight came, and by that time he had passed well over the side of a ridge and was completely out of sight of Camp Venture.

Selecting a suitable spot where the wind had swept a rock clear of snow, he laid aside his gun and blanket, and set to work to build a little fire and cook one slice of his meat for breakfast. The other he reserved for a late dinner.

As he moved on after breakfast, he came upon a flock of quails—or partridges, as they are more properly called in Virginia. They were helplessly huddled under the edge of a stone and were manifestly freezing to death. For when Tom, who was too much of a sportsman to shoot birds in the covey, tried to flush them, meaning to shoot them on wing, they were barely able to flutter about on the ground, and wholly incapable of rising in flight.

"I may as well have them," said the boy, "seeing that they'll be frozen to death in another half hour." So, after a little scrambling, he caught the eleven birds and quickly put them out of their suffering. Drawing some twine from a pocket, he strung the birds together and threw them over his neck for ease of carrying.

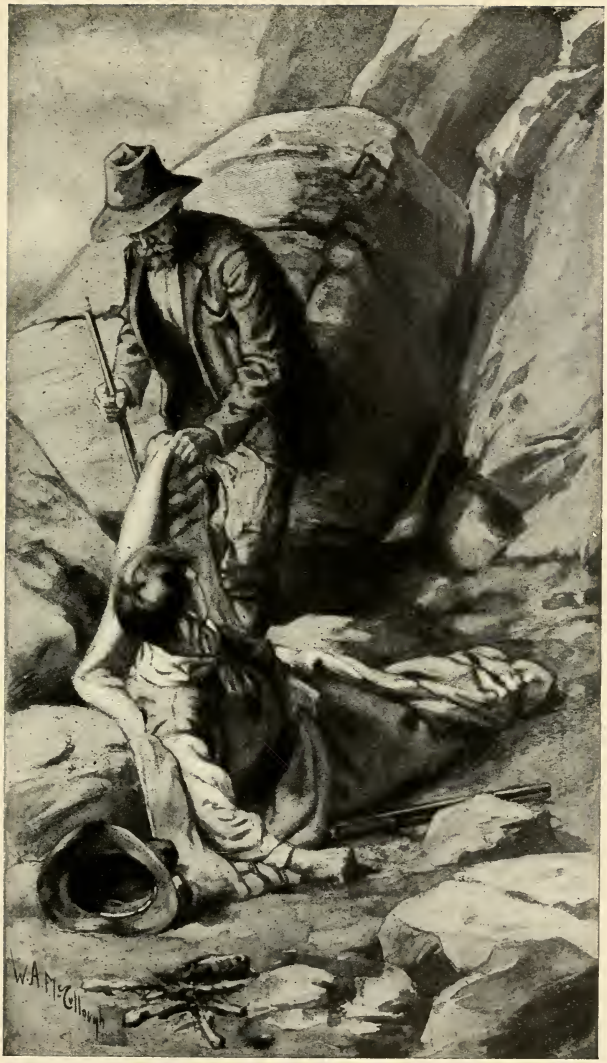
The mountain up here was rugged and uneven, scarred and seamed with chasms and deep hollows. Tom devoted all his energies to peering into these as if searching for something. At one time, as he was hunting for a place from which to get a good view of a small but deep ravine, he

flushed a flock of wild turkeys, seven or eight in number, and scarcely more than twenty feet distant from him. Curiously enough, he let them scamper away without so much as taking a shot at them.

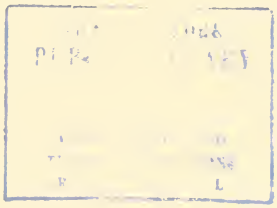
That was exceedingly unlike little Tom Ridsdale, and obviously it meant something. But what it meant did not appear. But shooting makes a noise and attracts attention. Tom did not want to attract attention.

About two o'clock in the afternoon, Tom carefully reconnoitered a spot where great blocks of stone had fallen from cliffs above to a ledge below lying loosely there and making small caverns. Having satisfied himself that neither human habitation nor any human being was within miles of this little hiding place, Tom collected some sticks and built a little fire in one of the crevices between the great blocks of stone. Here, he cooked and ate his remaining piece of bear beef. Then he opened his blanket, rolled himself in it, and disposed himself to sleep, in a half sitting, half lying posture with his head and shoulders resting against the rock.

"I must get a little sleep now," he said to himself, "as I didn't get any too much last night, and, of course, can't take any at all to-night. For if I slept without a fire in this weather, I'd



He felt a hand pulling at his blanket.



freeze to death, and it would never do to build a fire up here at night, when it could be seen for miles away."

Healthy boy that he was, he fell almost immediately into slumber, and it was nightfall when he woke. He took the risk of throwing two or three small sticks on his well-hidden fire, in order to broil one of his partridges for his supper. That done, he repacked his blanket, took up his gun, and set out again on his search for that something for which he had been looking all day.

All night long Tom toiled about, up and down hills, over rocks and cliffs, through snow that was now beginning to soften as the weather was growing milder, but the search resulted in nothing. When morning came, the well-nigh exhausted boy sought out what seemed a safe spot for the purpose, created a little fire, cooked three partridges and ate them, seasoning them with a little salt which he always, on his hunting trips, carried in a little India rubber tobacco bag. Then he stretched himself out for a sleep, no longer fearing to freeze, as the weather had become very much warmer than before.

It was four o'clock in the afternoon when Tom awoke. As he did so, he felt a hand pulling at that part of his blanket in which his head was wrapped—for all huntsmen and all soldiers, when

they sleep in the open, even in the warmest weather, find it necessary to wrap up their heads.

"Well, law's sakes!" exclaimed the mountaineer, who, rifle in hand, was bending over him, "Ef it ain't Little Tom! Well, I'm glad I didn't shoot, as I was fust off about to! Why, Tom, I wouldn't have shot you fer another of the Doctor's twenty dollar bills! No, not fer a pocket full of 'em! You don't know what you done fer me an' fer my little gal when you pay-rolled me"—the man always pronounced "parole" "pay-roll." "You see, I got home jest in time to save the little gal from starvin'. Her mother was dead in the cabin—you 'member I tole you she was consumptive like—well, she got to bleedin' one day at the nose an' mouth an' jist quit livin' like. So the little gal was left all alone there, an' there wan't nothin' whatsomever in the place to eat an' of course a little gal only six year old didn't know what to do. So fur two days before I got there she hadn't had a mouthful. Well, I had a little left from what you fellers had giv' me to eat when I left camp, an' I fust off fed her on that. It made her sick like, 'cause she hadn't been used to eatin' as you mout say, an' maybe I give her too much at oncet. But she quick got over that, an' I had that twenty dollar bill! You jest bet I hustled off down into the

holler to a still an' brought some o' the ground up corn an' rye an' a gallon of the 'lasses that they uses with it to make whiskey out'n an' took it home fer the little gal to eat."

"I am very sorry," said Tom, "to hear of your wife's death, but very glad you got home in time to save the little girl."

"Well, as to my ole woman, of course I can't help mournin', cause any how she was always a better wife than a no 'count feller like me deserves to have. But you see it wan't unexpected, like. We'd both on us seed it a comin' for a year or two, an' always comin' a little nigher, so it didn't seem so onnateral like as it would ef she'd been strong an' healthy an' laughin' like, as she used to be before I went away to prison."

With that the man buried his face in his hands and sobbed. After all, the well-to-do, the refined, the cultivated people of this world have no monopoly of love or of tender sensibilities.

Tom took the man's hand and pressed it warmly. Then by way of turning the conversation he said:

"I suppose you're wondering what I am doing up here in the high mountains?"

"Well, yes—it's risky of you, like. You see, I've done all the talkin' I could to persuade our people, like, that you fellers aint here to interfere

with 'em, an' lately they've let you alone. But still it ain't safe fer you, an' my earnest advice to you still is to git down out'n these mountings. I'm agoin' to keep on a talkin' in your favor an' a doin' all I kin fer to make it safe fer you to stay, but it won't never be real safe. You see, there's them up here in the high mountings what's suspicious like. They don't want to take no risks. They're always a lookin' out fer tricks, an' they won't believe but what you fellers mout be up to some trick. Anyhow they say 'men that ain't up in the mountings can't tell what's a goin' on up in the mountings,' an' some of 'em says, says they, 'men that's dead don't tell nothin' to the revenue officers.'"

"Nevertheless we're not going to be driven out, as you know," said Tom. "So now let's get to business."

"All right, Tom. Ef there's anythin' in this world I kin do fer you without hangin' fer it, I'll do it."

"Well," said Tom, "I came up here at risk of my life to look for you. I thought I might find your cabin or more probably find you standing guard over some still somewhere, and so I've been looking out for stills."

"Now, that's curious," said the man, "very curious. Fer that's edzactly what you found me

a doin'. You see, they's a still near here an' it's about as snugly tucked away as any still ever was in all these mountings. You'd never find it in the world, though you ain't at this minute more'n two hundred yards away from it. Still the folks what runs it don't feel overly safe in spite of their hidin' of the still. So they've give me a job like to climb about over the cliffs an' look out fer spies. That's how I come to find you, Tom."

"Well, I'm glad you did find me," said Tom, "for in all probability I never should have found you, and I stood a good chance of getting myself shot in trying. You said just now that you would do anything you could for me."

"Yes, an' I will!" answered the man, with emphasis. "Jest you try me, Tom, an' see ef I don't."

"Very well," said Tom. "I believe you. Now, what I want isn't much. We boys down there in Camp Venture ran out of something to eat the other day, and we nearly starved for a time. Finally, by good luck, we got a bear, and we have more than half of it left, and of course, now that the snow storm has passed away, I can get more game as we need it. But we haven't had any bread for more than a week, and we're hungry. So I have come out here to look for you, to see if you can't get me a bag of ground-up corn

or rye from one of the stills. I have money with me with which to pay for it."

"But you can't pay fer it, Tom," said the man solemnly. "They ain't any body around the still now, 'cause it's knocked off runnin' fer the next week er so, but they's plenty of ground corn an' rye there, an' I'll bring you all you kin carry of it, ef you'll wait here fer fifteen minutes, an' not a cent to pay."

"But it doesn't belong to you?" said Tom.

"No, in course not. I don't own no still. I wish I was rich enough."

"Then of course I can't let you give me the meal. I must pay full price for it or I'll go without it."

"But say, Tom, that stuff ain't never measured up or weighed up, an' nobody'd ever miss a bagful or two. Why, I carry a small bagful of it to my cabin every mornin', jest as a sort o' safeguard like fer the little gal till blackberry time comes. I'll bring you a bagful an' I tell you it shan't cost you a cent."

"And I tell you," said Tom, "that I won't take an ounce of it on any such terms. That meal belongs to other people. I want some of it—just as much as I can carry to Camp Venture with me—but I must pay for every ounce of it or I won't

take any of it. I never steal, and I don't intend to let you steal for me."

"Oh, it ain't stealin' like," answered the man; "you see people never care fer what they lose ef they don't know that they loses it."

"I don't suppose I can make you understand," said Tom, realizing the utter inability of the mountaineer's mind to grasp an ethical principle, even of the simplest kind, "but I tell you plainly that I want this bagful of corn meal if you'll let me pay honestly for it, and otherwise I don't want it at all, and won't take it. I would rather see every boy in Camp Venture starve than do a dishonest thing."

"Well, you see, you people from down the mounting draw these things a good deal finer than us folks up here in the mountings kin. I'm a member of the church an' I tries to behave accordin'. You never heard me swear an' you never will. You've done me the greatest favor any body ever done me, an' like an honest man I want to repay it a little, but you won't let me."

Tom saw that there was no use in trying to enlighten the mountaineer's perverted ethical sense and so he gave up the effort and simply said:

"Will you let me have the meal and let me pay for it, or will you not?"

"In course I will," said the mountaineer. "How many bags is you got?"

"Only this one," said Tom. "I couldn't carry more than that. It will hold a hundred pounds of meal."

"Yes, but I kin carry some," said the man, "and I'm a goin' to. I tell you you done me the biggest turn any body ever done me, when you put me on pay-roll, an' I'm bound to get even with you ef I kin. So I'm a goin' to fill your bag an' one that I've got down there of my own, an' I'm a goin' to tote one of 'em while you tote the other. I know easier paths than you do about these mountings an' I'm a goin' to show 'em to you. In some places we kin slide the meal bags down a incline fer a quarter of a mile at a time, jest on the ice, without no totin' at all. So we'll git two big bags o' meal to your camp betwixt this an' mornin'."

"But why not wait for daylight?" asked Tom.

"'Cause then the fellers would lynch me fer carryin' food to the enemy. You see it won't do fer me even to go into yer camp. I'll tote my bag to the top o' that bluff like, that rises this side o' the camp. Then I'll git out quick an' afterwards you kin slip the bag over the bluff like an' I'll git into no trouble."

With that the mountaineer took Tom's bag and

disappeared over a sort of cliff. Ten minutes later he returned with the bag full of a rude meal, made by grinding corn in a big coffee mill of the kind that grocers use.

"Now you jest stay here fer ten minutes or so an' I'll be back with the other sack. It's a good deal bigger'n this 'un, but I kin tote a good deal more'n you kin, an' you'll need all the meal you kin git."

"Wait a minute," said Tom. "How much am I to pay for this meal? I have only two dollars with me and perhaps it will not be enough."

"Well, you see, Tom, I done tole you you needn't pay nothin' fer it, but you wouldn't have it that way on no account. So I reckon I'll charge you the same price I pay when I buy that sort o' meal from the still. That's a dollar fer them two bags."

"That's very cheap," said Tom. "Are you sure it's a proper price?"

"Sartin' sure," answered the man. "You see it's a mighty poor sort o' meal—jest soft mounting corn ground up like in a coffee mill to make whiskey out'n. You'll have to wet it up mouty soft like to make it stick together fer bread, an' I'll tell you a trick about that. You jest wet it up with boilin' hot water. That sort o' cooks it like. Make it very wet an' don't mind even ef

a little o' the water stan's on top o' the dough in the pan. That'll cook away an' your bread'll be all the better fer it. But a dollar is a high price fer it."

By the time the second bag of meal came it was high time for the pair to start if they were to reach Camp Venture before daylight. But the mountaineer knew all the short cuts, and better still, all the easy cuts—paths that gave a minimum of up-hill work while presenting other advantages of importance. At one point, for example, he led Tom to a spot where there was a steep shelving rock, completely coated with hard ice.

"Now," he said, "You an' me couldn't go down that slide without breakin' every bone we've got. But we kin slip our meal bags down it 'thout no hurt to nobody. Then I'll show you a way round it, so's we kin git the meal agin."

With that he placed his meal bag in position, gave it a little push, and instantly it disappeared down the hill in the darkness. Tom did the same with his bag, and then, striding off to the right, the mountaineer led the way by a difficult but practicable path around the rock to a point quite a quarter of a mile below, where the two found their bags of meal safely reposing in a snow bank.

This was repeated at several points on the jour-

ney, while at other points where the bags could not be thus slidden down, because of an insufficient incline, it was easy for the two to drag them as they walked and this they did. As the way was almost entirely down hill, there was very little of what the mountaineer called "toting" to be done

About three o'clock in the morning the two reached the brow of that cliff under which the boys had made their first temporary encampment, and which constituted the mountain-side limit of Camp Venture. There they parted, the mountaineer protesting his eager desire to hurry back and "look arter the little gal."

"Wait a minute," said Tom. "I've paid you for this meal, but I haven't paid you for carrying it down the mountain or for the risk you've taken in doing that."

"I don't want no pay, Tom," protested the man with eagerness. "I hain't fergot that you put me on pay-roll jest in the nick o' time."

"That's all right," said Tom. "But I took two dollars with me and I expected to pay all of it for the meal. Now I want you to take the remaining dollar to the 'little gal' as a present from Tom. There, don't stop to say anything or you'll be late in getting back," added Tom, as he pressed the dollar bill into the man's hands.

"Well, all I'll stop to say, Little Tom," said the mountaineer, "is this: Ef you git out'n meal agin, you come to the same place I found you in. I'll keep a look out fer you there every day. An' ef they's war made on you it won't be long before I'm takin' a hand on your side with my rifle, an' it don't make no difference whatsomever who it is that's a fightin' of you."

CHAPTER XXV

A Difficulty

LITTLE Tom was now in a quandary. He was on the bluff overlooking and south of the camp, but he did not know how to get into the camp. To walk in would be dangerous, of course. The sentinel might mistake him for an enemy and shoot at him. A high wind was blowing from the direction of Camp Venture, so that no call of Tom's could be heard there. It was a little after three o'clock in the morning, very dark, very cold, and Tom was very tired with his labor in bringing the meal down the mountain.

Finally an idea dawned in his mind.

"If I can't go to Camp Venture I can at any rate bring Camp Venture to me," he said to himself. With that he collected some of the dry broom straw that protruded above the snow and such sticks and other combustibles as he could find, and set to work to build a fire.

"When the sentinel sees a fire here," he said

to himself, "he'll call the other boys, and they'll all get their guns and come out here to see what's the matter. I'll stand up in the full glare of the light and on the camp side of the fire, so that they can recognize me."

His plan worked to perfection. It was not five minutes after he got a good blaze going before the whole company surrounded him.

"What is it, Tom?" they cried. "Why did you build a fire here?"

"Wait!" said Tom. "There are two bags of corn meal down there just under the bluff. Some of you go and carry them to the house. I'm fearfully tired and cold."

The boys quickly saw how true this was, and they plied the poor, exhausted fellow with no more questions. He strode away to the hut, entered it, threw down his remaining partridges, set his gun in its customary place and stood for a few minutes with his back to the big fire, warming himself. Presently, when the boys all came in with the bags of meal, Jack, seeing the look of almost helpless exhaustion in Tom's face, himself removed the blanket from the boy's shoulders, untied it and spread it out upon the bunkful of broom straw, for by this time Ed. had got all their bedding dry again.

Meantime the doctor went to a kettle that sat

near the fire, placed it upon some very hot coals, and a minute later dipped up a tin cup of its contents.

"Here, Tom, drink this," he said. "It'll do you good and give you strength."

It was a soup that Ed had made—or a broth rather—from the bones and scraps of their bear dinners, and to Tom's exhausted system it seemed wonderfully refreshing. Meantime Harry asked:

"Are your feet frozen, Tom?"

"No," answered the boy. "They are scarcely at all cold. You see, I've been using them too vigorously for that. But they are dreadfully sore and tired."

With that Harry filled their one foot tub with hot water and directing Tom to sit down Harry himself removed the boy's boots and socks, felt of his feet to make sure that they were not frosted, and placed them in the hot water. The doctor applauded the performance and when it was over, and Tom's whole body was warm again, the boys rolled him up, not in his own blanket alone, but in all the other blankets there were in the camp and tumbled him into his bunk.

"There now!" said Jack, "sleep till you wake of your own accord. We'll all keep as still as mice."

"No, don't," said Tom. "I shall sleep better if you go on talking as usual. Then I'll know when I half wake that I'm here in camp and I'll go to sleep again easily." Then, after the boys thought him asleep Tom turned over and said, with much solicitude in his voice:

"Boys, I'm sorry I broke up your sleep so early this morning, but I couldn't very well help myself."

"Never you mind about that," said Jim Chenowith. "You're on duty now,—sleep duty,—and if you don't shut up and go to sleep I'll pour buckets of cold water over you. We're not suffering for sleep just because we were waked up an hour or so earlier than usual."

Tom was too tired to argue or to resist. He turned over on his side and a minute later he was asleep.

Meantime the boys busied themselves with breakfast. Ed. was still the head cook, partly because he knew more about cooking than any body else did, and partly because the doctor still refused to let him work with an axe. But all the boys helped him with this meal, as they always did when they were in the house at the time of the preparation of meals.

"How long will it be, Doctor, before Tom will wake up hungry?" asked Ed. solicitously.

"Not more than two hours at farthest," answered the doctor. "But why?"

"Well, I want to have something ready for him when he wakes—something hot and appetizing."

And Ed. accomplished his purpose. He gave the other boys their breakfast of broiled bear's meat and ash cakes and then he set to work on Tom's breakfast. He dressed two of the quails and laid them aside. Then he mixed some of the meal and made pones of it, baking them in a skillet. When Tom began to stir restlessly Ed. raked out a fine bed of clean coals and placed the two quails upon them to broil. They required very close and constant attention, of course, to prevent burning, and just as Ed. was finally taking them off the fire Tom sat up in his bunk and asked:

"Hello, Ed! what's up? You've got something there that smells mighty good to a hungry fellow like me. What is it?"

"I'll answer your questions one at a time," answered Ed. "'What's up?' Why, you are, of course. 'What is it'—that I'm cooking? You just get out of bed and see."

Tom obeyed. Creeping stiffly out of bed he seized the foot tub that had stood there for two hours or more and felt of the water. It was by this time sharply cold. Tom stripped off his

clothing, soused his head into the water and then taking a sponge, sluiced his whole body with the nearly freezing liquid. A rapid rub down followed, and Tom called out:

"Now, Ed., bring on your breakfast as soon as you can. I'm nearly starved."

With that he slipped again into his clothing and a minute later was devouring a quail and a big pone of very coarse corn bread which Ed had buttered with the scant remains of the ante-Christmas bacon drippings.

"Where are the other fellows?" asked Tom, as he ate.

"Out chopping," answered Ed.

"Did they have bacon dripping butter on their bread this morning?"

"Indeed they didn't. That was saved, by unanimous vote, for you. For but for you there wouldn't have been any bread in Camp Venture to butter with anything."

"Oh, well," said Tom, "but you see it isn't fair. You ought to have divided the bacon fat—"

"Now look here, Tom," Ed. broke in, "if you'll find a single boy in this company who is growling about the breakfast he got this morning—the best part of it due to your exertions in getting us the meal,—I'll agree to eat that boy

and all his complaints. I tell you this bacon fat was saved for you by special request of every fellow in the camp, and that's all there is about it. I foresaw that you'd want to divide it up, so I put it on your bread myself instead of leaving that for you to do. You see you can't help eating it now."

"Ed., you fellows are the very best and kindliest that ever were in this world," said Tom, with so much of emotion that he did not venture to say any more.

"But I say, Tom," said Ed., eager to turn the course of the talk, "where and how did you get this meal?"

"Oh, that's a long story," answered Tom, "and the other fellows will want to hear it, and really I can't tell it twice. Besides, now that I've had my breakfast I'm going out to do my share of the chopping. I'll tell you all about it while we sit around the fire to-night."

CHAPTER XXVI

The Doctor's Talk

TOM went at once to his chopping, for being, as the doctor said, "a healthy young animal," his sleep, his bath and his breakfast had completely cured him of his exhaustion.

At noon the boys made a hasty dinner, as was their custom when chopping, for the days were still short and they liked to utilize as many of the daylight hours as they could.

They had contracted to deliver a specified number of ties by the first of April or sooner, and they had already completed that part of their task; but their contract permitted them to send down as many more ties, doubling the number if they could ; while, as for cord-wood and bridge timbers, there was no limit set upon their deliveries. They were anxious to cut all they could and thus to make their winter's work as profitable as possible, and so they were not disposed to waste any part of a day so fine as this one was.

While they were chopping in the afternoon, just as a big tree on which the doctor was at work began swaying to its fall, a large raccoon which had been hiding in the hollow of one of its upper limbs leaped to the ground. The doctor, who had become almost as "quick on trigger" as Tom himself, seized a shotgun and fired. The animal fell instantly, riddled with turkey shot, and a minute later the doctor held it up by the tail, saying:

"Here's a supper for us, boys! It'll be a change from bear beef, any how, and you are to have the skin, Tom."

The boys shouted for joy, for they were growing exceedingly weary of bear meat by this time, and there are few things more appetizing than a fat raccoon. So the doctor carried his game to the house, where Ed proceeded at once to dress it for supper.

It was not until after supper that Tom related the story of his mountain adventure, and as he was an expert mimic, he succeeded in so presenting the mountaineer's part in the conversation as to cause a deal of laughter, in which Tom himself joined heartily, although his own memory of his difficult journey was anything but ludicrous.

The weather had grown exceedingly cold again and the logs were piled high on the fire. As the

boys basked in the heat that was radiated into the room, some one said: "What a pity it is to waste all the heat that is going off up the chimney! It would run an engine."

"So it would," said the doctor, "but that is what all the world is constantly doing. The wood that we have burned since supper would supply a French or Italian house with fire for a month at least."

"But how?" asked Jack. "Surely wood burns up as fast in France or Italy as it does here."

"Of course. But the French and Italians—especially the Italians—have very little wood, and they use it very sparingly. When they make an open fire it is made of sticks about eight or ten inches long, very small and usually consisting of round wood. They rarely have a split stick, because they never cut down a tree, or if they do they use every part of it that is bigger than your wrist for some kind of lumber useful in the arts."

"But if they don't cut down trees," asked Harry, "how do they get any wood at all?"

"They have very few trees," answered the doctor, "and instead of cutting them down they trim off the branches from time to time and make fire wood of them, utilizing every particle, even down to the smallest twigs, which they cut into eight inch lengths and tie up in bundles for use

in boiling their soup kettles. In some parts of Southern California," continued the doctor, " they get their fire wood in the same way, though they do not have to bother with the little twigs, as tree growth is enormously rapid in that winterless climate. At San Bernardino I have seen many houses standing in large grounds, with a row of cottonwood trees all around at the edge of the sidewalk. I have often seen these trees with every limb cut off close to the stem of the tree—not more than a few feet from it at farthest. In that way the owner gets his fire wood—he doesn't need much of it—for three years to come. The trees thus pollarded quickly put out a host of new branches and as these grow rapidly in a climate that has no winter, they are ready to be cut again three years later."

" But if trees grow so rapidly there," asked Tom, " how is it that there are no woodlands there? "

" Because it is a rainless region. It is a desert simply for a lack of water, and when men build reservoirs up in the mountains and bring water down in irrigating ditches that desert literally blossoms like a rose. The soil is as rich as any down in our valleys and creek low grounds here, and as there is no winter every living thing grows all the year round. At Riverside, for ex-

ample, you find a luxuriance of growth unmatched anywhere in these mountains. Eucalyptus trees border all the roads, towering to great heights. Back of them are orange and lemon groves and still further back vast vineyards in which the stumps of the vines—for they are cut back to a stump every year, to make them bear—are from four to six inches in diameter, so that they need no stakes to support them as vines do here. Often also there are rows of luxuriant pepper trees flourishing in the middle of the road. In short, you can nowhere on earth except in swamps, find a more luxuriant riot of vegetation than at Riverside. Yet until men made reservoirs and ditches and brought water down there from the mountains the ground that now supports all this splendid growth was as bare as the palm of your hand, and when you drive out of Riverside in any direction, you come instantly to an absolute desert, without even a weed growing on it, the moment you pass beyond the line of irrigating ditches."

"Is there much land of that sort?" asked Jack, "land that is fertile I mean in itself, but is desert because of a lack of water?"

"Millions of acres of it, though much of it has already been redeemed by irrigation. General Sherman once said that when he first crossed the

San Joaquin and Sacramento valleys he could have bought the whole of them for twenty-five cents, and in fact would not have given a penny for both. Yet to-day those valleys are the most productive wheat fields in the world, not even excepting Minnesota and the Dakotas. In a single year they have been known to furnish fifty million bushels of wheat for export, after feeding the Pacific coast fat."

"But is there always water to be had for irrigating purposes?" asked Jack, who was becoming intensely interested.

"Practically, yes," the doctor answered. "That is a country of vast mountain ranges, all the way from the Rockies to the sea, with great valleys and plains lying between. It is almost always raining or snowing in the mountains, and indeed the tops of the higher ranges are nearly always snow clad, even in summer. I remember once crossing the Utah desert, which lies between the Rocky mountains proper and the Wassach range. There is no sand or gravel there, but only a singularly rich soil, barren for lack of rain alone. During the entire trip across we were never for one minute out of sight of either a snow storm or a rain storm some where in the mountains that surround the desert. Obviously enough water falls in the mountains to make of that des-

ert the very garden spot of America when ever men take measures to store the water and bring it down to the desert lands below. The Mormons, who have made a rich farming region in this way out of the desert west of the Wassach range, have already begun doing this on the eastern side in a limited way. At Pleasant Valley they have brought water down from the mountains and made gardens that are a delight to the eye and mind. They grow there the finest black Hamburg grapes in the world. But neither that nor any other of the great deserts can be redeemed entirely until either the government or some great company able to spend money by scores of millions shall undertake the work in a systematic way, selling water rights with every farm. Of course no farmer can provide a water supply for himself from mountains twenty miles away, but if a great company or the government would catch and store the water and sell the right to use it to each farmer, as is done in parts of Southern California, the major part of what used to be called 'the great American desert' would soon become the great American garden. Of course the alkali deserts of Nevada and worse still, the arid, sandy, gravelly, soilless plains of Arizona and New Mexico can never be reclaimed in that way. But the regions that are barren only be-

cause they get no rain, can be redeemed and very certainly will be when this country becomes so crowded with population that every acre of arable land will be needed."

"But isn't this country pretty badly crowded already?" asked Tom.

"Crowded? No," answered the doctor. "It is very sparsely settled instead. This country has a population of only twenty people to the square mile, while Belgium has 529 and England 540 to the square mile. Long before we fill up to any such extent as that all our arid lands that are fit for cultivation will be watered from the mountains, and regions where now even a cactus cannot grow will produce wheat, corn, cattle and fruits in lavish abundance. But I say, boys, we've talked till after eleven o'clock. This will never do; let's get to bed."

CHAPTER XXVII

Some Features of the Situation

EVERY morning Tom "prowled," as he put it, all around the camp, "just to see how things are," he said.

Two mornings after the talk reported in the last chapter Tom found, out under the bluff, a big bag of rye meal or rather of rye coarsely ground for whiskey making purposes. He dragged it over the hard snow to camp and opened it. In its mouth he found a piece of paper and written upon it in rude letters was the following:

U PADE 2 MUTCH
FER THE MELE. HEARES
A NOTHER BAG TO MAK IT
SKWAR. DONT GIM
ME AWA.

BILL JONES.

Tom called all the boys into conference before deciding what to do with this present. He said to them:

"Bill's ideas of morality are somewhat confused. In his eagerness to render me some return for my act in letting him go back to his 'little gal' on parole, he wanted to give me the meal I brought to camp the other morning. It never occurred to him that as the meal didn't belong to him, he had no right to give it to me, and all I could say to him was utterly futile as an effort to make him take a moral or rational view of the case. Now I am seriously afraid our friend Bill stole this rye meal. That would perfectly fit in with his ideas of morality, gratitude and all that sort of thing. Still we don't know that he did steal it. After all I did pay him a double price for the meal we got, and possibly he has applied part of the surplus payment to the purchase of this additional supply from his criminal friends the distillers. After all I have no means of knowing that he ever paid the original owners of that first meal any part of the money that I gave him for it. He couldn't see at the time why he shouldn't steal it for me, and so he may have stolen this."

"Well," said the doctor, "you honestly paid him for the former supply of meal, insisting that

you wouldn't take it at all unless you paid for it. He understands that perfectly. He has a sufficient sense of honesty now to bring you an additional bag on the ground that you paid an excessive price for the former supply and that he wants to make it 'skwar.' I don't see how we can go behind that, especially as we cannot possibly return the meal either to him or to its owners if he stole it. Our only option is to eat the stuff or take it back out there to the foot of the bluff and leave it there to rot."

After some further discussion it was decided to eat the rye meal as practically the only thing that could be done with it.

One week later another bag of meal—corn meal this time—was found out under the bluff, but with it came no explanation of any kind. Thus the bread supply in Camp Venture was made secure for a time at least, and for a meat supply the guns did all that was necessary—especially Tom's gun, for Tom spent many of his hours wandering over the mountains in search of game, and Tom rarely sought game in vain.

It was coming on to be March now, and the weather had greatly moderated. The snow was melting off the mountains and the spring rains were falling freely.

"Our meal will run out before long," said the

doctor one night, "but the time is near at hand when we can send a boy down the mountain to bring up a pack mule with some supplies."

"Indeed you can't," said Tom.

"But why not?" asked the doctor.

"Simply because there are some mountain torrents in the way, that no human being could pass, even if he had one of your big steamships to help him in the crossing."

"But I saw no mountain torrents on our way up," said the doctor.

"Certainly not," answered Tom, "for they weren't mountain torrents then, but the dry beds of streams. But now it is different. It would be as impossible now for us to 'git down out'n the mountings' as to fly to the moon—unless we went down over the cliffs there, following the chute. And of course we couldn't bring a pack mule up that way. No, we've got to stick it out and live on what we can get till our work is done, and then—as the spring is coming on and the way is blocked by the torrents of which I spoke,—we've got to make our way over the cliffs down there by the chute, for we simply cannot get down the mountain by the way we came."

"How do you know this, Tom?" asked Harry.

"Why, I've tried it. You see any road down the mountain that furnishes an easy way is sure

to be crossed by creeks that are dry in the summer and fall, but raging whirlpools when spring melts the snow and sends millions of gallons of water every minute down the steep inclines. I count myself a strong swimmer. But I could no more swim across one of those sluiceways than I could climb up a sunbeam to the rainbow. I tell you we can get nothing from down below now, and I tell you that we can't ourselves go down the mountain by the way by which we came up, for two or three months to come."

"What are we to do, then, Tom?" asked the doctor.

"Well, first, we're to feed ourselves as best we can till we've finished our work; and then we're to go down the mountain on its steep side along the chute. That will involve a great deal of toil and some danger. We shall have to let ourselves down over cliffs by hanging on to bushes, with the certainty that if the bushes give way we shall be dashed to pieces on the rocks below. But that's the only way we can get down the mountain unless we are willing to wait for summer."

"Well, the question is not an immediately pressing one," said Jack. "We've got a lot of work ahead of us yet, and we've got plenty of game and plenty of bread stuffs in camp."

"Plenty of game, yes," said the doctor. "But

as for bread stuffs, I don't think we have more than a peck or so left."

The next morning Tom, in his "prowlings" found two big bags of corn and rye meal lying there under the bluff. "It's a case of bread cast upon the waters returning to us after many days," said Tom.

CHAPTER XXVIII

The Capture of Camp Venture

TOM had miscalculated the weather, misled as every body is apt to be by the calendar. As he had not at all anticipated, the softness of early March presently gave way to a severe cold wave, which not only put an end to the spring rains, but stopped the melting of the snow upon the mountains and dried up those torrents that had alone blocked the way down the mountain since the great snow drift barriers had disappeared.

"I take it all back, fellows," he said, one night. "I didn't look for such weather as this in March. But any how any fellow in the party can go down the mountain now. Whether he ever gets back again or not is a question not easily determined. A very little thaw would make that impossible."

"My view," said the doctor, "is that we'd better not risk it. This cold weather simply cannot last long at this season of the year, and we can't spare any boy from our company. We have

two bags of meal in camp—enough to last us three or four weeks—and of course Tom's gun will provide us with meat. It seems to me it would be exceedingly unwise to send any one of our number down the mountain and not only unwise but wholly unnecessary. What do you think, boys?"

Every boy in the party shared the doctor's opinion, and so it was decided not to send one of the company down the mountain at this time, although the weather conditions were especially favorable for the moment at least. They proved also to be favorable to something else.

Just before daylight the next morning Jim, who was on guard, quitted his post and came hurriedly into the house. He waked his comrades, saying:

"Get up quickly, boys, and get your guns. The moonshiners have completely surrounded Camp Venture."

Ten seconds later all the boys were out on the platform, fully armed. It was still too dark to see men even at a short distance, but low voices could be heard in every direction round the camp. The boys themselves consulted only in whispers.

Jack took command, of course.

"Don't shoot, boys, even if they shoot at us," he said. "They can do little damage that way,

as we have this wooden barrier to stop their bullets. What we've got to look out for is a rush, and we must reserve our fire to repel that with."

"Hadn't some of us better go to the rear of the house?" asked Harry. "They may rush us from that direction."

"No," answered Jack. "There's no opening to the house on that side; and we have no barrier there to fight behind. If they attack from that direction we must fight from inside the house. Suppose you go in Harry and knock out three or four pieces of chinking about breast high, so as to give us a port hole to fire through. Keep a keen look out through the crack, and if they advance from that direction call us at once. But don't any of you shoot, front or rear, till they make a rush."

As he spoke, two or three shots came from the enemy in front, the bullets burying themselves harmlessly in the wooden barrier well below the feet of the boys, as they stood on the platform, for the barrier could not be seen in the darkness, and the men shooting aimed at about where they thought a man's breast would be if he stood upon the ground.

The temptation to return the fire was almost irresistible, particularly to Tom, who had his magazine rifle in hand. But Jack resolutely in-

sisted upon reserving fire in order to be ready to repel a charge whenever it should come.

The light was now growing stronger and here and there it was possible to make out one of the enemy, crouching behind a rock or in some little depression of the ground. Enough of them could be seen by this time to show clearly that they outnumbered the garrison of Camp Venture more than four or five to one. Somebody remarked upon this fact, whereupon Jack replied, still speaking in a whisper:

"That's true! But if they make the rush that I'm expecting they won't outnumber us much by the time they get here."

As the light grew still stronger, Tom set his gun down, ejaculating "Well, well, well."

"What is it, Tom?" asked the doctor.

"Why, those aren't moonshiners, but revenue officers and soldiers!"

A little further scrutiny convinced the boys that Tom's keen eyes had seen aright. The bullets were still pattering now and then against the wooden parapet, but evidently the enemy was not yet ready to make the charge which alone could give him possession of the fortress.

Tom felt in his pocket, drew out a handkerchief and tied it to the end of his gun. Then he descended the little ladder to the ground.

"What are you going to do Tom?" asked Jack.

"Why, I'm going out under a flag of truce to explain to those fellows what a stupid blunder they've made. They've mistaken Camp Venture for an illicit distillery, as if anybody would set up a still in such an open place as this."

"But wait, Tom! It is still so dark that they may not see your flag of truce. They may all fire at you at once. Wait till broad daylight comes."

"Yes," answered Tom, "and in the meantime those fellows may make their charge,—they're forming for it now,—and in that case we'll have to shoot half of them. No, I'm going out with my flag of truce now, and I'll simply have to take the chances of getting shot."

With that he passed around the end of the barrier and sallied forth, holding his flag of truce above him and calling as he went "Truce! Truce! A flag of truce! I bear a flag of truce! Don't shoot!"

Nevertheless several bullets from improved army rifles passed uncomfortably close to him—one of them cutting a hole through the top of one of his boots—before the officer in command of the assailing party could be made to understand the nature of Tom's mission. At last he understood it and calling to Tom to halt where he stood,

which was about midway between the two forces —the lieutenant who commanded the troops, hoisted another white handkerchief and went out to meet the boy.

To him Tom explained the nature and purpose of Camp Venture and invited him and his party to come in and inspect the place for themselves.

The lieutenant looked at him incredulously at first, and then laughed.

"That's a good one on us!" he said presently, "if what you say is true."

"I never tell lies!" said Tom, in resentment.

"I don't believe you do," said the officer. "You don't look it, anyhow. But of course we mustn't take any risk of being caught in a trap. So I'll send a squad of my men with you to inspect. Here, Sergeant Malby; take a detail of four men and go with this young man to the camp yonder. In the meantime, my boy, I'll detain that magazine rifle of yours, if you please, till I satisfy myself."

Tom handed over his gun and led the sergeant and his squad into Camp Venture. As daylight had now fully come, the soldiers had little trouble in satisfying themselves that there was no still there, and that the company consisted only of five boys and the doctor. The sergeant so reported to the lieutenant and that officer was disposed to

be satisfied. Not so the three revenue agents, however.

"It's a fishy story these fellows tell," said the chief of them, "and I for one don't intend to be drawn into a trap. There may be no still and only a small company of boys in that cabin, but who knows how many stills there may be hidden around here, or how many moonshiners may be hiding about us, ready to massacre us?"

"All right," said the lieutenant, in some disgust at the revenue officer's timidity. "I'll settle all that. Stay here, men, and wait for orders."

With that he strode off alone to the cabin and entered it. He there explained the situation to the boys and said:

"I'm afraid I shall have to ask you fellows to go out there and stack your arms, considering yourselves under arrest till our timid friends of revenue officers can make a tour of inspection all about your camp under the armed escort of my men. They were so sure that they had surprised a still here that they can't get over the notion. So we must humor them."

The boys readily consented to the plan. They marched out to a point designated by the lieutenant and there stacked their arms, over which the lieutenant summoned two of his men to stand guard. Then he bade the revenue officers come

on, and under escort of his file of soldiers they minutely scrutinized the entire camp. The felled trees not yet chopped into shape for sending down the mountain; the large quantity of ties and cord-wood that were piled near the chute; the multitude of stumps from which timber had been recently cut; the great piles of brush left over from the chopping; and finally the chute itself, now nearly worn out with use—all these attested the character of the camp and indicated an industry on the part of its occupants, such as no company of moonshiners ever displayed.

At last the Lieutenant said to the chief revenue officer, with some show of impatience:

"Aren't you satisfied, yet? Why don't you look under these boys' finger nails? How do you know they haven't some stills secreted there?"

"Yes, I'm satisfied with all but one thing," answered the agent of the excise.

"What's that?" asked Jack. "Whatever it is, I'll try to satisfy you concerning it."

"Why, I don't understand, if you aren't engaged in any crooked business, what you built that fortification for. If you didn't feel the need of resisting the government agents, what need had you for a barrier like that to shoot behind?"

"We built that to protect ourselves against moonshiners," answered Jack.

"But why should moonshiners disturb you?" asked the still incredulous revenue agent.

"Because they believed when we first came up here that we were spies of the internal revenue and most of them still believe it. They began by ordering us to quit the mountains and when we wouldn't they sent men to shoot at us. One of our party is still suffering from a bullet wound received at their hands. When we found that we must defend ourselves we erected that barrier to help us. Now that you have come up here we'll need it you may be sure."

"Why?" asked the revenue officer.

"Because they'll never believe now that we didn't send for you and bring you here. They'll make ceaseless war on us now."

Meanwhile the Lieutenant was examining the fortification. Presently he turned to Jack and said:

"Will you allow me to suggest an improvement in your defensive work?"

"Certainly," answered Jack. "We shall be very glad."

"Well the top of your parapet is level. Whenever you shoot over it you must expose your head, neck and shoulders above it. Now if you raise it

by ten or twelve inches and then cut embrasures or notches in the top of it to shoot through you can put up a fight with far less exposure of your persons."

The suggestion was so obviously a good one that Jack determined on the instant to adopt it.

"I'll do that, Lieutenant, as soon as you release us from arrest and let us have our guns again."

"Oh, I forgot that," answered the Lieutenant. "Here sentinel," to the man who had been posted outside, "tell Sergeant Malby to send those guns back to the house, and to withdraw you from duty here. Young men, you are released from arrest."

Then turning to the chief revenue officer, for whose timid lack of sagacity he had obviously the profoundest contempt, he asked:

"What's your program now?"

"Well I'm going to clear this whole mountain of stills."

"How long do you reckon it will take?" asked the Lieutenant.

"Well a week or two weeks perhaps."

"And what provisions have you made for your commissariat for such a length of time?"

"What do you mean?"

"Why, I have forty men here and I'm under your orders, to do whatever you say, but every one of my forty men has a mouth to feed, and

under my orders I brought only three days' rations in the haversacks. If you intend to keep us up here for a week or two, ought you not to have made some provision for a food supply?"

"Why didn't you look after that?" asked the revenue officer.

"Because it was none of my business. I'm a soldier. I obey orders. My orders were to take three days' cooked rations and march my men up here to support the revenue officers in whatever they undertook."

"That's always the way," said the revenue man. "The troops always fail us at the critical moment. That's why our efforts to break up moonshining always come to nothing."

"Pardon me, sir," answered the officer rising in his wrath. "I'll trouble you to take that back. The troops under my command have not failed you and they will not. We have nothing to do with collecting the revenue. That's your business. Ours is merely to fight anybody that resists you. That duty we are ready to do just so long as you may desire. We'll force a way for you to any part of these mountains that you may desire to visit and we'll keep it up for a year if you wish. But in the meantime somebody must provide my men with food!"

"If that's the way you look at the matter," said

the revenue officer, "we might as well go down the mountain at once."

"It isn't a question of how I look at the matter," answered the lieutenant, impatiently. "I tell you I'm ready and my men are ready for any service you may assign to us. But I tell you also that we must have something to eat, and it is your duty to arrange it."

"But how can I?"

"Would it be impertinent in me to suggest," asked the lieutenant, "that you ought to have thought of that before you began your raid? If you had said to the commandant that your expedition was likely to occupy a week or two he would have ordered the commissary to furnish me with two or three weeks' provisions and the quartermaster to supply enough stout pack mules to carry them. As it was, you represented this as a two days' trip and he ordered me to carry three days' rations in the haversacks."

"Well, we'd better retreat at once," answered the revenue officer.

"But why? It isn't even yet too late to repair your blunder. Why can't you send one of your men down the mountain at once to bring up a train of pack mules loaded with provisions? He can be back here in less than two days if he hurries."

"But I don't know—" began the man.

"I don't care what you know or don't know," answered the young West Pointer. "I simply tell you that as soon as my men run out of rations I'll march them down the hill again. It is my duty to see that they don't starve."

"But if I send a man down the mountain," answered the revenue agent, "some moonshiner might shoot him on the way."

"Very. probably," answered the lieutenant. "That's a risk that men engaged in the revenue service are bound to take, I suppose. But if you request it, I will send a squad of four soldiers to guard your man on the way down and to protect the pack train on its way back."

Manifestly the revenue officer was anxious to "git down out'n the mountings," but he feared the report which in that case the angry and disgusted lieutenant would probably make, even more than he feared the moonshiners. Still he hesitated to detail one of his men to go down the mountain under escort of a corporal and three men.

This matter being still unsettled, the lieutenant said:

"Now, what next?"

"How do you mean?"

"Why, what is your next move?"

"Well, I suppose we must remain here till the provisions come, if we decide to send for them," answered the man.

The lieutenant shrugged his shoulders, and for the moment remained silent. Presently he said:

"Of course that's for you to determine. But for myself I can't see why you should deliberately waste two days giving the moonshiners time in which to rip out their stills and bury them where even your sagacity will never find them. I don't see why you shouldn't utilize the time of waiting for supplies in finding and capturing stills. However that is none of my business. Will you tell me where you wish to make your headquarters, so that I may pitch my camp accordingly?"

At that moment bullets began pattering in the camp and the lieutenant instantly leaped to his feet and hurried to the platform of the parapet. Using his field glass he presently located the points from which the firing came. Then calmly but quickly he descended and called to Sergeant Malby:

"Form the men in open order out there under the bluff."

Then he strode away hurriedly to the bluff and hastily examined it, selecting the points at which it was easiest of ascent. With a few quietly given orders, he mounted to the top of the rock, and in

half a minute more his men, crouching down to shield themselves from the fire, were in line of battle by his side.

"I'm going to see that," said Tom, seizing his rifle and hurrying to the line of troops. "It's better than a game of chess."

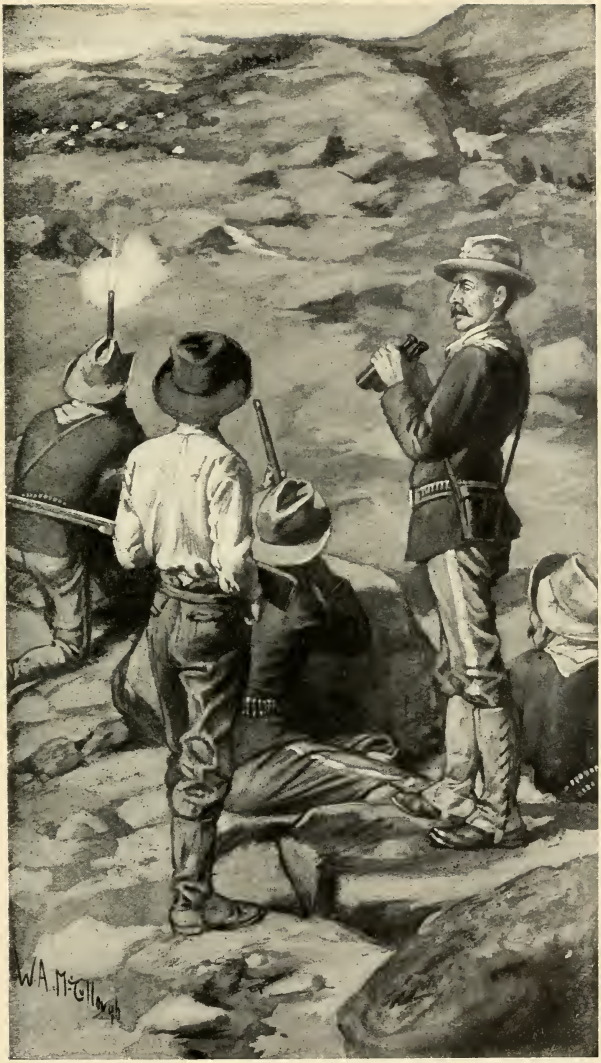
By this time, under the lieutenant's calmly uttered instructions—for there seemed to be no suggestion of excitement in his voice or manner—two small squads had been thrown forward from the right and left of the line, and were rapidly creeping up the mountain, with the evident purpose of getting to the rear of the moonshiners. Meantime the lieutenant stood up with his glass to his eyes, minutely observing the progress of his flanking parties. By his orders his men all lay down, taking advantage of every rock and inequality of the ground for protection, and delivering a steady fire all the time.

Presently the lieutenant lowered his glass and turning, saw little Tom standing erect by his side.

"This will never do, my boy!" he exclaimed. "Lie down quick or one of those mountaineers will pick you off with his rifle."

"I can stand up as long as you can, Lieutenant," answered Tom, "even if I am not a soldier."

"But it is my duty to stand just now," said the lieutenant. "I must direct this operation and



"Lie down; quick!"

strike from here the moment my flanking parties reach proper positions."

"And it is my pleasure to stand," answered Tom, "to see how you do it."

The lieutenant again brought his glass to his eyes. Then he lowered it and looked earnestly at Tom, who still stood erect by his side, paying no heed to the rain of bullets about him.

"Why aren't you at West Point?" he asked. "You're the sort we want in the army."

Then, without waiting for an answer, the lieutenant again looked through his glass and seeing that his flanking parties had gained the positions desired in rear of the mountaineers, he ordered the whole line to advance as rapidly as possible. At the same time the flanking parties closed in upon the rear of the mountaineers, and five minutes later the action ended in the surrender of all the moonshiners.

Tom saw it all, but when it was over he discovered a pain in his left ear, and, feeling, found that a small-bore bullet had passed through what he called the flap of it, boring a hole as round as if it had been punched with a railroad conductor's instrument.

The captured mountaineers were brought at once to Camp Venture. Two of them were dead and three severely wounded. To these last and

to two of the lieutenant's men who had also received bullets in their bodies, the doctor ministered assiduously. The unwounded mountaineers were placed in a hastily constructed "guard house," built just under the bluff.

CHAPTER XXIX

A Puzzling Situation

NO sooner was the action over and the wounded men attended to than the lieutenant again talked with the revenue officer. That person was more halting and irresolute than ever. He had hidden, in a crouching position behind the barrier during the fight, and Jack, seeing him thus screened, had said to him:

"Perhaps you now begin to understand why we needed our protective work;" but the man made no answer. The lieutenant said to him after the mélee:

"Now that I have two of my own men and three of the mountaineers severely wounded, I cannot march down the mountain. I shall stay here and answer any duty call you may make upon me. But I must have food for my men and for your prisoners. Are you going to provide it or are you not?"

The man who was not only irresolute but an arrant coward as well, hesitated. He pleaded for "time to think."

"But while you are thinking," answered the soldier, "we'll all starve. Are you ready to send one of your men down the mountain under escort or are you not? Yes or no, and I'll act accordingly."

"Well, you see, this fuss will bring all the moonshiners in the mountains down upon us," answered the man, "and really, Lieutenant, I don't think it would be prudent just now, to weaken your force by detaching any of your men. We might all be butchered here at any moment."

The military officer was exasperated almost beyond endurance by the manifest cowardice and obstinacy of the revenue agent. He was on the point of breaking out into denunciation, but he restrained himself and called to a sentinel instead. When the sentinel came he said to him:

"Tell Sergeant Malby to report to me," and when the sergeant touched his hat and stood "at attention," the lieutenant said:

"Go at once and make out a requisition for one month's supplies for all the troops and all the prisoners, and for pack mules enough to bring the stuff up the mountain. Order Corporal Jenkins to report to me with a detail of four men, equipped for active work, immediately."

Then borrowing writing materials from the

boys, he wrote a hurried note to his commandant below, relating the events that had occurred and setting forth the circumstances in which he was placed. By the time that this was done, the sergeant returned with the requisition ready for signature, and the corporal reported with his squad. With a few hurried instructions to the corporal, the lieutenant sent him down the mountain, specially charging him to hurry both going and coming. "You see we've got all these prisoners to feed—seven of them, not counting the wounded—as well as ourselves. We'll all be starving in another twenty-four hours. So make all haste."

Then the lieutenant sought out the boys, who had gone to work at their chopping—all of them except the doctor, who was still busy over the wounded men,—for Ed. was now well enough to do a little work each day, under orders to avoid severe strains and heavy lifting.

When the officer sought out Jack and asked him for a conference, Jack called the other boys about him, explaining:

"Our camp is sort of a republic, Lieutenant, in which all have an equal voice, while each does the thing that he can do better than anybody else can. So with your permission I will call all the boys together for our talk."

The lieutenant assented and all sat down on the logs that were lying about.

"We're in a rather awkward position," said the military man. "That revenue agent asked our commandant for some soldiers to protect him in raiding a still up here. He gave us the impression that it would take one day to come up here and do the work, and one day for our return. So I was ordered to take half a company, with three days' cooked rations, and accompany the revenue officers. They knew just where your camp was, and they thought they knew that it was the still they wanted.

"Now the irresolute—Well never mind that. The revenue agent insists upon staying in the mountains for an indefinite time, and now that two of my men and three of our prisoners are severely wounded and in the hands of your good young doctor, I am not reluctant to stay. But we must have food, and that sublimated idiot has provided none and is afraid even to send after any. So I have myself sent a squad down the mountain with a requisition. They will return just as quickly as possible, but I don't see how it will be possible for them to get back under two, or more—probably three days. So I want to ask you to lend us some provisions, which I will return the moment the caravan gets here."

"But we have no provisions!" said Jack, in consternation. "Our total supply consists of less than two bags of meal and perhaps half a dozen squirrels and rabbits. That wouldn't go far among so many."

"I'll tell you what," broke in Tom. "If the lieutenant will lend me two men to help carry, I'll go foraging and see what I can bring in in the way of game."

Jack explained to the military man that Tom had been from the first the camp's reliance for meat supplies, and that incidentally he had secured all the meal that was then in camp.

"Excellent!" exclaimed the lieutenant. "We have more bread than anything else, and we needn't borrow any of your meal. But if your brother—by the way, it was you who stood by me in the fight out there this morning, wasn't it? Are you much hurt?"

"Oh, no," answered Tom. "One of those moonshiners thought I ought to wear earrings, and so he pierced my left ear with a bullet, that's all," said Tom, whose ear the doctor had carefully disinfected and bandaged.

"But why aren't you at West Point?" again asked the officer. "I never saw a cooler hand or a boy that the army so clearly needed. Why aren't you at West Point?"

"Because I can't get an appointment," said Tom.

"Why can't you get an appointment?"

"Because I have no political influence. You see my father, while he lived, was very active in politics, and he belonged to a party just the opposite of the one our present Congressman belongs to."

"Would you like to go?" asked the lieutenant.

"Very much, indeed," answered Tom. "I want just the sort of education they give there."

"Could you stand the entrance examinations—say a year hence?"

"Yes. I could stand them now. I went all over that ground when I first tried to get an appointment."

"Well now," broke in Jack, "this isn't getting meat. Tom, go hunting immediately, and keep on going hunting till the famine in this camp is over. I haven't a doubt the lieutenant will lend you the men you want to help carry game."

"Certainly!" answered the lieutenant, beckoning to a sentinel to come to him.

"Tell Sergeant Malby to send me two strong men instantly."

Tom took two guns with him, requiring one of the soldiers to carry the rifle, while he carried the shot gun, double loaded, for big or little game. It was now about noon, and the hunting party did

not return till after dark. When they did they brought with them as the spoil of our young Nimrod's guns, a half grown bear, a deer weighing perhaps a hundred and fifty pounds, three wild turkeys and a big string of hares and squirrels. Besides these Tom was laboriously dragging by a string a big wild boar.

"That boar's a disputed bird," he said. "This soldier, Johnson, and I fired at him at the same instant. He set out to rip Johnson open with his tusks, like a vest with no buttons on it, and Johnson fired to protect himself. At the same moment I fired a charge of buckshot into the beast. Johnson's bullet struck him in the neck, just about where I fondly imagine the jugular vein or something else of that sort to be, while my nine buckshot striking him just behind the left fore leg, went through him about where his heart ought to be if it's in the right place. Anyhow the animal gave up the ghost in an astonishing hurry, and possibly the doctor might find out, by a post mortem examination, which shot killed him. But in my humble opinion the time necessary for that can be better spent in preparing the gentleman for the table. I move that we roast him whole and invite the soldiers to dine with us! He's big enough to go round."

It did not take long to carry that motion or to

begin carrying it into effect. The lieutenant ordered the company cook to assist Ed. in preparing the wild boar and roasting him. Ed. carefully saved the "giblets" for future use, a proceeding which gave the company cook a totally new economic suggestion in the use of animals killed for food. Then the two required the other soldiers to build a great fire out-of-doors, and to erect a pole frame work near it, from which they hung the boar to roast. Ed. gave the cook still another good suggestion by thrusting a dripping pan under the hog and catching all he could of the fat that fell from the animal.

"What do you do that for?" asked the company cook.

"For two reasons," answered Ed. "First, because I want all this fat to cook with and to use as butter hereafter. You've no idea how far it goes when people are on short rations. Secondly, because if all this fat fell upon these glowing coals it would blaze up and our hog would be scorched and burned. You are a company cook and I never was anything of the sort. But I honestly believe I could teach you some things about cooking."

"Of course you could," said the soldier. "And perhaps I could teach you some also. I could show you how to bake bread on a barrel head, or even on a ramrod, only we don't have ramrods

since these new fangled breech-loading guns came into use."

Two or three hours later, at ten o'clock, the big porker was roasted "to a turn," and Jack, recognizing the necessity of maintaining military distinctions in all that related to association in military life, invited the lieutenant to take the night dinner with him and his companions inside the house, leaving the soldiers to dine out of doors, in accordance with their custom. So Jack asked Ed. to cut off a ham and some other choice parts of the wild boar and send them into the hut. There the boys and the lieutenant dined together, with the three revenue officers for additional guests.

The lieutenant had no very kindly feelings for the chief revenue officer, because he had discovered him to be a coward, and a brave man never likes to touch elbows with a coward, at dinner or any where else. On the other hand the chief revenue officer had no very kindly feelings for the lieutenant, because he knew that the lieutenant had found him out for the coward and incapable that he was, and it is not in human nature for any man to feel kindly toward another who has found him out to that extent.

Nevertheless the dinner passed off pleasantly enough until the lieutenant, at its end, asked of the revenue agent:

"Are you going to raid any stills to-night?"

"No!" angrily answered the officer. "Why do you keep on asking me that question?"

"Only that I may make my dispositions accordingly," calmly answered the lieutenant. "You forget that I am here in an entirely subordinate capacity. I am under no orders to raid stills. I am here only to support you in any raids you may make. You represent the civil arm, I the military, and the military arm is always subordinate to the civil. It is not for me to suggest that you might successfully raid half a dozen stills to-night. It is my duty simply to offer my services and those of my men in aid of any plans you may have formed. And, as it is my duty to consult the comfort of my men, so far as that is possible, I naturally ask whether you want them on marching duty to-night or whether I may order them to make themselves as comfortable as they can in bivouac. As I now understand that you do not contemplate any active operations to-night, I will make my dispositions accordingly. Sentinel!"

This last was a summons to the soldier who always stands guard just outside the door of any house or tent in which a commanding officer may be. The sentinel entered immediately and saluted.

"Call the corporal of the guard," commanded

the lieutenant, "and bid him report to me for instructions."

In half a minute the corporal came. The only instructions he received were these:

"Bid the sergeant report to me here." Thus in military life is everything done "decently and in order." The sentinel could not have summoned the sergeant without quitting his post; but he could summon the corporal by a simple guard call, and the corporal could go to the sergeant and summon him to the lieutenant's presence. When he appeared and deferentially saluted, the lieutenant said to him:

"We shall remain where we are till further orders. Dispose the men in the best way you can to make them comfortable and let them build camp-fires. Throw out six pickets up the mountain on the south, one below here on the north, one on the east and one on the west. Send the men on the south as far up the mountain as where the enemy was encountered this morning. Then charge the sentries who are guarding our prisoners to be on the alert and serve as camp guards as well. They are to listen for shots from any of the pickets and report to me as soon as one is heard from any direction. I shall sleep under the bluff, near the spring. The watchword is 'alert;' the countersign 'attention.'"

"But, lieutenant," said Jack, when the sergeant had taken his leave, "why will you not accept our hospitality? Why will you not sleep here in our house? We have five wounded men here, it is true, but there is one spare bunk and you are more than welcome to it."

"I am very grateful, I am sure," said the lieutenant, "but it is the rule of my life that whenever I am in command and my men have to sleep in the open, I also sleep in the open. I have lived up to that rule even in a blizzard on the plains. Besides, this—well, this revenue officer—has done just enough to provoke the moonshiners and their friends, and not half enough to intimidate them. That is why I ordered our pickets thrown so far out to-night. There is a half sunken road running across the ridge up there. They had it for a breastwork this morning. I mean to have it next time. But what I was going to say is this: A man sleeping in a house sleeps soundly; a man sleeping in the open sleeps very lightly. As it is my purpose to visit all my pickets at least three times to-night, I want to sleep very lightly; so with all thanks for your courteous hospitality, I will sleep out under the bluff to-night, and now I must say good night."

CHAPTER XXX

A Point of Honor

THERE was no disturbance that night, and the next morning Tom took his two soldiers and went hunting again. Tom had a positive genius for getting game. This time he brought back no deer, no wild boar, and no half grown bear; but he and his soldiers were loaded down with turkeys, squirrels and hares. There was meat enough in the camp now to last for a day or two, but the bread supply was nearly exhausted, inasmuch as the boys had divided their meal with the soldiers.

In this situation the lieutenant went to Tom and engaged him in conversation.

"Now, I know," he said, "that there are many stills around here. Every one of them has a supply of ground up grain, and I want some of it. You have hunted all over the mountains, and of course you know where some at least of the stills are."

"Yes, I know where several of them are," answered Tom.

"Well, I propose to raid some of them, to get breadstuffs. Will you go with my men and point out the stills?"

"No!" answered Tom, with emphasis on the monosyllable.

"But why not?" asked the lieutenant. "Surely *you* are not afraid."

"Not the least bit," answered Tom. "But I've entered into an honorable agreement with the moonshiners and I mean to keep it. I've assured them that we boys were not here to spy them out and betray them, and I've pledged them my honor that if they let us alone we would let them alone. You see this illicit distilling is none of my business, or yours either, Lieutenant. It's the business of the revenue officers. Now under our honorable agreement these people, who began by ordering us off the mountain and followed that up by shooting at us for not going, have let us alone for many weeks past, and I am going to keep my promise to let them alone in return."

"But they haven't let you alone," answered the lieutenant. "Their assault upon the camp—"

"Pardon me," answered Tom. "That was not an assault upon us, but upon the revenue officers and their military support. I do not think it absolves me from my promise. Besides that, I doubt if you have any right to raid stills except

under orders of the revenue officers, and they are too badly frightened to undertake anything of the kind. You have no warrants. Your sole duty and right and privilege is to go with these revenue officers and protect them in the execution of their duty."

"That is certainly true," answered the lieutenant after a moment's pause for consideration. "I hadn't thought of it in that way."

"And still further," said Tom, "it is very certain that there isn't an illicit still now running on this mountain. The moment you fellows appeared every still was ripped off its furnace and buried somewhere, every mash tub was emptied and sent bowling down the mountain, and every scrap of evidence that there had ever been an illicit still there was completely destroyed. So, even if you find the buildings in which the business was formerly carried on, what right will you have to seize upon the meal or anything else you may find there? You might as well raid a mill and seize all that you find in it."

"But you know, Tom, and I know, that these people are lawlessly engaged in defrauding the revenue."

"Of course," said Tom. "But that doesn't justify you in violating the law and robbing them of their meal. If you could catch them in de-

frauding the revenue you might perhaps have a right to confiscate their materials, as the law prescribes, though as you're not a revenue officer I doubt that. Just now you can't possibly catch them doing anything of the kind. Understand me, Lieutenant, I am as much devoted as you are to law and order. I know these men to be thieves and upon occasion murderers. But neither of us has a right to convict them without proof of their guilt."

Tom had never made so long a speech in all his life or one inspired by so much of earnestness.

The lieutenant sat silent for a while, thinking the matter over. Presently he arose, took Tom's hand and said:

"I believe you are right, Tom. At any rate you are right on the point of honor that controls your own course in this matter. We are taught at West Point that whenever there is the least or the greatest doubt as to a point of honor, it is an honorable man's duty to give honor the benefit of the doubt. We'll make no raids except under the warrants of the revenue officers. We'll live on meat till the caravan comes up the mountain."

CHAPTER XXXI

Corporal Jenkins's March

BUT the caravan did not come. A thaw had set in, reinforced by a rain, and all the mountain streams were torrents again—utterly impassable.

When Tom explained the case the lieutenant said:

"Nevertheless Corporal Jenkins will get here with the supplies. He may be much longer in coming than we hoped for, but he will come. He is a man of resource and he never gives up."

In the meantime Corporal Jenkins was in a very bad way half way up the mountain side. He had passed one torrent while yet it was only half full, and now it was so full that he could not even retreat with his mule caravan. In front was another torrent that it would have been sheer insanity to attempt to cross—a stream fifty feet wide, rushing down through a gorge with a violence that carried great stones with it, some of them weighing many tons, while the water was almost completely filled with a tangled mass of whirling

trees that had been torn up by the roots by the on rush of the waters.

"We'll have to go back, Corporal," suggested one of the men.

"We can't go back," he replied. "That last stream we crossed is as full as this one now. Besides we must get these supplies to camp."

"But how?"

"I don't know how! Shut up and let me think the thing out."

After his thinking the corporal ordered the caravan to leave the trail and work its way up the mountain in the space between the two streams. It was a difficult and sometimes a perilous ascent. There were cliffs in the way around and over which a passage was partly found and partly forced by great labor. At some places the pathway was so steep that no mule could carry his load up it. Here the corporal divided the loads and led the mules up with only one-fourth or one-fifth of the burden upon each. Then unloading that he took the animals back again and placed another portion of their load upon their backs, repeating the journey as often as might be necessary. As he had twenty mules in his pack train it sometimes took half a day to get over thirty or forty yards of distance in this tedious and toilsome

fashion. But at any rate there was progress made.

Often, too, there were great detours to be made in order to get around obstacles that could not be overcome. Thus day after day was consumed in the tedious climb up the mountain. The corporal knew how anxiously his commanding officer was awaiting his coming, but he could not hurry it more than he was already doing.

"What's your plan, Corporal?" asked one of the men when a bivouac was made one evening.

"Simple enough," answered the corporal. "When you've served in the mountains as long as I have, you'll know that every mountain torrent has a beginning somewhere up towards the top of the mountain. I'm simply following this one up to find its head waters and go around them."

The raging stream had grown much smaller now, as the caravan neared its place of beginning, and the next morning the corporal found a place at which he thought it safe to attempt a crossing. It was perilous work, but after an hour or two of struggle all the mules and all the men were got safely to the farther side.

The corporal knew that he was much higher up

the mountain than the site of Camp Venture. But it was no part of his plan to descend until he had passed the head waters of all other streams and reached a point directly south of the camp and above it. So he proceeded westward around the mountain.

Without knowing what the trusty corporal's plans or proceedings would be, the lieutenant felt that he was likely to have difficulty in locating the camp. So he ordered a brush fire kept burning night and day, so that the smoke of it by day and the light of it by night might be seen from a great distance.

Finally, exactly ten days from the time of the corporal's departure, his caravan was seen slowly and toilsomely descending the mountain toward the camp.

A great shout of gladness went up from all the men, who had tasted nothing but meat for a week past, and Tom, seizing his rifle started up the hill at a rapid pace to show the corporal the easiest way down the steep mountain side.

When the corporal reached camp the lieutenant complimented him highly upon his skill and success in overcoming difficulties, and declared his purpose to make a commendatory report of his conduct of the expedition.

"But how did you happen to come to us from up the mountain instead of from down the mountain?" asked the lieutenant, while eagerly devouring an ash cake.

"Why," said the corporal, "when I found my road up the mountain blocked by an impassable torrent, I remembered some of my old soldier experiences and I turned them around. I remembered that when we camp on hills and set out in search of water the rule is to keep always going down hill, because that's the way water runs. If you keep on doing that you'll come to water after awhile. So, turning that around, I said to myself, 'all this water comes from up the mountain. The only way to get past it is to go clear up to where it comes from.' That's what I did, and then I marched straight around the high mountain till I saw your brush fire last night about midnight. I wanted to come right on, but both the men and the mules were exhausted by a terrific day's work and besides it was too dark to see the difficult way; so I bivouacked for the night and started down the hill between daylight and sunrise. There, Lieutenant, that's the whole story, and it isn't much of a story, at that."

"Well, I don't know," said the lieutenant, meditatively. "It's enough of a story at any rate to

make a sergeant out of Corporal Jenkins, if my recommendations carry any weight at headquarters. Corporal, you have conducted this affair in a masterly manner, with zeal, skill and discretion. My report will mention these facts."

"Thank you, Lieutenant," was all that the soldier could say. But it was quite enough.

CHAPTER XXXII

The Lieutenant's Wrath

THE lieutenant's faith in Tom's sportsmanship was so great that in making his requisition for thirty days' rations for his men and his prisoners he had asked to have all the meat rations, except a dozen sides of bacon, commuted into rations of flour, meal, maccaroni, rice, potatoes and other starchy foods. His first care, after the mules were unloaded, was to replenish the leader of Camp Venture with such provisions as these in return for the drafts he had been compelled to make upon their supplies. "And besides," he said, "Camp Venture is just now my hospital, with five wounded men in it, to every one of whom ten days' rations are overdue."

Thus at last the boys were abundantly supplied with starchy food and for the rest Tom's gun never failed to provide a sufficient supply of meat.

Now that five of the six bunks in Camp Venture were occupied by wounded men, the boys made for themselves the best beds they could, on the earthen floor. At first it was proposed that the

doctor should occupy the one bunk not devoted to the use of a wounded man, but the doctor dismissed the suggestion with scorn. Next it was suggested that Ed. should still consider himself an invalid and accept the hospitality of the bunk.

"But I'm no longer an invalid," answered Ed., almost angrily. "I'm well enough now to chop down trees, and take cold baths. A pretty sort of sick fellow I am!"

Finally it was agreed that the several boys should occupy the bunk in succession, one each night, and lots were drawn for the order in which they should occupy it. As the soldiers now kept guard it was no longer necessary for the boys to keep a sentinel awake.

The lieutenant's second care after provisioning the boys, was to make another appeal to the revenue officer, or rather to place that person again in his rightful position of responsibility.

"I have provisioned my force," he said. "Are you contemplating any further operations in the mountains? If so I shall be glad to place myself and my men at your disposal. We can march at a moment's notice."

"I don't know," said the officer, "whether further operations just now would yield results commensurate with the risk. What do you think, Lieutenant?"

"Oh, it is not my business to think," answered the military man, "at least not on questions of that kind. I have been ordered up here to give military support to any operations that you may undertake against the illicit distillers. Beyond giving such military support I have no functions whatever."

"But what do you think, Lieutenant?"

"I tell you I am not thinking. I am simply waiting for orders."

"But surely you have some opinion. Won't you give me the benefit of it?"

"Yes," answered the lieutenant. "I have an opinion—several of them, in fact—and as you insist, I will give you the benefit of them. It is my opinion that you have conducted your affairs like an imbecile. You were sent up here to break up the illicit stills and you haven't found one of them yet and never will. You found this camp of wood chopping boys and made me capture it for you. Then the moonshiners took the offensive, while you were pottering around here trying to find a still where a mere glance would have convinced an intelligent man that there was none. Very well, I captured the moonshiners while you were hiding behind the Camp Venture barricade. They are our prisoners, no thanks to you. I think now, as I told you at the time, that then, if ever,

was your time to search out the stills and capture them. You would not do it, and it is my conviction that by this time every still in the mountain is so securely hidden that a fine tooth comb couldn't find one of them or any tangible evidence that one of them was ever in existence. You've got the materials for a report, of course, —a report showing so many prisoners captured —but I fancy you'll find it difficult to show either that *you* captured them or that you had any authority to capture them. I captured them and I had a right to do so, because they attacked a body of regular troops engaged in doing their duty. In other words, they levied war upon the United States and were caught in the act. The charge of treason cannot be sustained against them, probably; if not they are guilty of rioting, assault and battery and all that sort of thing. But what charge can *you* bring against them? You may say that they are moonshiners, but you can't offer a particle of proof of that, simply because you would not follow up this affair by hunting out the stills. There, you have a few of my leading 'opinions,' and as you don't seem to relish them, perhaps I needn't give you any more."

The revenue agent was dejected beyond measure. For a time he sat still with a flushed and angry face. Then, as he realized the situation in

which he had placed himself by his foolishness and indecision, he turned pale. Finally he appealed again to the lieutenant:

"Won't you advise me what to do now at any rate?" he asked.

"I'll advise you as to nothing. When the time to act came I volunteered some advice and you rejected it. I now simply notify you that my force will be held ready to march at a moment's warning to any point where you may feel the need of military support in the discharge of your duty."

"But, Lieutenant—"

"I tell you I have said all I am going to say," broke in the military man, angered quite as much by the man's imbecility as by his obvious cowardice. "I await any requisition you may make upon me for military support, and I will instantly respond to every such requisition. As to advice, I have none to offer. When we go back down the mountain, you doubtless will make your report. I will make mine also. Good night, sir."

And with that the lieutenant strode away to his camp fire out under the bluff, gave his orders for the night and went to sleep with a clear conscience.

CHAPTER XXXIII

A Homing Prospect

THE revenue officers and the soldiers remained at Camp Venture, the doctor caring for the wounded men who were rapidly recovering as the days went by. Meantime the boys were nearing the end of their winter's work and were looking forward rather eagerly to a homegoing in the near future. Tom continued to hunt for game, and his diligence in that direction provided a sufficient supply of meat, while the lieutenant's stores furnished enough bread stuffs for all.

The chief revenue officer announced his purpose to take his party down the mountain as soon as the streams should be passable, and Jack announced his intention of taking his party down as soon as they should have finished the work they had laid out for themselves.

"I shan't wait for the streams to get out of the way," he said. "We'll go down the mountain not by the road, but over the cliffs as Tom did that night we were so scared about him. There are no

streams to cross there. That's perfectly feasible, isn't it, Tom?"

"Oh, yes," answered Tom, "particularly as we shall have the doctor along to patch up any broken legs or arms that we may get in dropping down over precipices."

"Is there serious danger of that?" asked Jim.

"Yes, if you are careless; no, if you are careful," answered Tom. "In fact, my experience teaches me that that's usually the case. The man who doesn't look out for himself usually meets with what he calls 'accidents' and blames Luck, or Fortune or Providence with mishaps which a little intelligent care on his own part would have averted. In fact I don't believe there is any such thing as accident, strictly speaking."

"How about that perforated ear of yours, Tom?" asked Ed.

"Oh, that illustrates my point. That wasn't an accident at all. I might have stayed here in the house that morning, and I'd have been perfectly safe. You see, I had no business out there on the line. The work to be done there belonged exclusively to the soldiers. But, with my curiosity to see how such things were managed I went out there and then like a young idiot I stood up by the lieutenant, when all the soldiers were lying down. If I hadn't done that I wouldn't have got

my ear pierced. No, there's no such thing as accident in a world that is governed by law."

"But Tom," asked Jim Chenowith, "suppose you are on a railroad train and it runs off the track and you are considerably done up. Isn't that an accident?"

"No. The train would never have run off the track if everybody had done his duty. But somebody laid the rails carelessly, or some engineer failed to discover that a stone was loose on the cliff above and about to drop down on the track, or somebody else failed somewhere; otherwise the train would never have run off the track. I tell you I don't believe there is any such thing as accident, in the strict sense of the word. This world is governed by law. Causes produce their effects as certainly as the multiplication table gives its results. The trouble is we don't take enough care of the causes."

"But sometimes we don't know enough to do that," said Jack.

"Well, ignorance is the cause in that case. I don't say that one is always to blame for the evils that befall him. I only say that they don't befall him by 'accident,' and that with due care we can avoid most of them. That is particularly true in letting yourself down over a precipice by holding on to bushes. Some bushes hold on tenaciously

and some give way with the smallest pull. The thing to do is never to let go of the secure one till you have tried the next one and satisfied yourself of its stability—or better still, never to trust yourself to one bush except while making an instantaneous change, but hold by two always. But I say, Jack, how near are we to the end of our job?"

"Well," said Jack, taking out his memorandum book and studying the entries in it, "we have only about sixty more ties to send down. We have already sent a great deal more cord wood than we agreed to, but as to that the railroad people said 'the more the better,' and so with bridge timbers. We did not agree to furnish any particular number of them and I fancy the railroad people didn't expect us to send more than two or three, while in fact we have sent down twenty-nine and have six more nearly ready to send. My plan is to cut the remaining ties which we are permitted to furnish under our contract, send down the bridge timbers that we have ready or nearly so, cut up all the remains of the felled timber into cord wood and send that down, and then go down ourselves. Even if the trail were open, which it isn't likely to be for some weeks to come, I should favor going down over the cliffs instead, because that will land us near where

we want to be, while if we went down by the trail we should have to walk fifteen miles to get there."

The camp was early astir next morning, for now that the thought of going home had come to them, the boys were eager to hasten the time for it.

"By working hard," said Jack, "we can turn out ten or twelve ties a day, or under favorable conditions twenty. At three o'clock to-day we'll begin working the chutes and as I reckon it we'll be ready to start down a little before the first of April, and that was the date set. The weather is fine now and growing finer every day."

"Yes," answered Harry, "and the days are growing long enough to enable us to do full days' work."

Under the new inspiration the axes were briskly used that day until three o'clock. Then all hands were called to help roll the big bridge timbers into place and send them down the mountain. Four of them were sent off, the others not being quite ready yet. But the handling of these big timbers was slow work and so night fell before any of the ties or cordwood could be sent down the chute. There were twenty-one ties ready and about thirty cords of wood. But these must wait until three o'clock the next day, and by that time the number of ties and the quantity of cord wood would be considerably increased.

CHAPTER XXXIV

In the Hands of the Enemy

WEARY as they were with their over-energetic day's work, the boys went to bed early that night—all of them but Tom. That tireless Nimrod had found a bear's den the day before and was minded to go out and watch for the bear that inhabited it. "Your bear is a night prowler," he said, "and if I can catch this one going out of his den or into it to-night, I'll bring home a supply of meat. We're a trifle short of that commodity just now."

Several of the boys wanted to go with Tom, and the lieutenant, who had dined with them that evening, wanted to send two soldiers as his assistants.

"No," said Tom, "I don't want anybody with me. We'd inevitably talk, and then we'd never see a bear. I'll go alone."

With that he took his rifle and went out into the darkness, while the rest of the boys went to bed and to sleep.

As he neared the bear den which he had discovered during the day and identified by tracks, Tom moved very cautiously, making no noise, and, secreting himself between two rock masses, lay down to await developments.

Hour after hour passed, and there were none. Still Tom maintained an attitude of alert attention.

Presently a great light appeared over a spur of the mountain, in the direction of Camp Venture.

"There's something the matter over there," said Tom to himself, "but with all those soldiers there they don't need me half as much as they need a bear."

Just at that moment—it was about three o'clock in the morning—Tom heard a crackling of sticks near at hand, and a moment later a great black bear came waddling and lumbering along on his way to the den.

With that instinct of humorous perception which was strong in Tom, he could not help likening the belated beast to a convivial gentleman returning from his club in the small hours.

Then it occurred to him that convivial gentlemen under such circumstances are sometimes "held up" at their own door ways, a fact which still further heightened the resemblance between the two cases. It next occurred to Tom that

should his shot prove ineffective or imperfectly effective, the bear might get the better of him, as convivial gentlemen sometimes do with footpads. For, from the point at which Tom was lying, there was no avenue of escape except directly in the path of the bear, and a wounded bear is about as ugly an enemy to encounter as it is possible to find anywhere.

"Moral:" said Tom to himself, "Don't shoot till you've got a bead on a vital point. Fortunately this rifle has an 'initial velocity' as they call it, which will send a bullet through the thickest skull that any animal in the world wears as a breastwork to his brains."

Of course Tom would have preferred to shoot at the animal's heart, but there was no chance to do that, for at that moment the great beast discovered his huntsman and presented his full front to him at a distance of less than ten feet. Another second and the bear would make mince meat of the boy. So Tom taking a hasty aim fired at the animal's forehead, and the bullet did its work so well that the beast fell instantly dead.

After waiting for a minute or so to see if any scratching capacity remained in his game, Tom went to the bear and after inspecting it muttered: "I've shot Ursa Major himself," for the bear was of unusual bulk, greatly the largest Tom had ever

seen. "I wonder what the stars will look like now that the constellation of the Great Bear is done for."

The beast was much too heavy for Tom to carry or even drag to the camp. So he instantly set out in search of assistance. His plan was to go to the camp and secure three or four soldiers to assist him in transporting his game. But he had not gone far on his campward journey before he was "held up" by three mountaineers. Fortunately one of the party—apparently its leader—was his own particular mountaineer, the one whom he had set free and who had so generously repaid his favor with gifts of corn and rye meal.

"Now set down, little Tom," said the man; "we wants a little talk with you."

"All right," said Tom, "I'm ready."

"Well you see, you done tole me an' I done tole the other folks as how you boys had nothin' whatsomever to do with the revenue officers or the soldiers."

"That's all right," said Tom. "We haven't had anything to do with them, we haven't spied upon you fellows or molested you in any way."

"But there's a big gang o' soldiers an' revenue officers in your camp."

"Yes, I know that," said Tom. "But are we talking fair and square as we did before?"

"Yes, fa'r an' squar'," answered the man.

"Very well then, I'll tell you about this matter. We boys don't like your illegal occupation up here in the mountains, but it is none of our business. We have never spied out your stills and certainly we have given no information to the revenue officers."

"What did they come up here for then?" asked one of the mountaineer's companions.

"They came up to capture us. They had seen the lights of Camp Venture and had located us. So they thought they had a still sure, and they came up here to capture it. The first thing they did was to surround us and fire at us in the dark. I explained matters to them and they searched our camp all over. Then they decided to camp there till they could get some provisions from down below, and while they were waiting, they asked me to tell them where the stills were so that they might raid them for meal. I knew where some stills were of course, for I've seen a lot since I came up here, but I refused to tell them."

"Is that honest Injun, Tom?"

"Yes," answered the boy. "I never tell lies. But you must understand me clearly. I haven't the smallest respect for you moonshiners or for your business. Under ordinary circumstances I should not hesitate to tell the revenue officers

where a still was if I happened to know. But I made a bargain with you, Bill Jones. I told you truly that we had come up here to cut railroad ties and not to interfere with you or your criminal business. I told you that if you'd let us alone we'd let you alone. We could have sent a message down the mountain by our chute any day which would have brought the soldiers and the revenue people up at once but we didn't. I had promised you and I have kept my promise."

"Yes," answered Bill Jones, "an' you let me off in a state prison case, jest in time to save my little gal from starvin' to death! I'll never forgit it, an' I tell you fellers you mustn't hurt little Tom. Ef you do, I'll stand on his side an' they'll be some ugly work done before you're through with it."

"Well," said one of the men, "he tells a mighty nice, slick story like, an' maybe it's true. But they's jest one question I'd like to ask him afore we close the conversation like."

"Ask me any question you please," said Tom, "and I'll answer it truly. I have nothing to conceal, and I never tell lies."

"Well," said the man after discharging a quid of tobacco from further service and biting off a new one to take its place, "what I want to know is what you'se been doin', out here in the mounting all night like."

"That's easy," said Tom. "I've been killing a bear."

"Where?" asked the man.

"About a quarter of a mile back. You see we're getting short of meat down there in camp, with all these soldiers quartered upon us."

"Then ef you done got a bear whar is it?" asked the man.

"It is back there, as I tell you, about a quarter of a mile."

"Why didn't you bring it with you?" asked the man.

"Simply because it is too heavy. It is the biggest bear I ever saw. I was on my way to camp, when you stopped me, to get some fellows to come out here and help me drag it."

"Will you show it to us?" asked the man, still incredulously. "Seein's believin' you know."

"Certainly," said Tom. "The little old moon is rising now, and you can get a good look at the bear that I've sat up all night to kill."

He led the way back and at sight of the bear even the incredulous one of the party was satisfied.

"Now," spoke up Bill Jones, "we've got jest one thing to do. Ef this bar is left here it'll be half et up by varmints afore men can be brought from the camp to carry it in. Fellers we've got to carry it in fer Little Tom—him what let me go

jist in time to save my little gal from starvin' when her mother was lyin dead in the cabin an' fer two days the little gal hadn't so much as a bite to eat. We'll drag the bar to the camp fer Little Tom!"

One of the men offered an objection: "We'll git arrested ef we do," he said.

"For what?" asked Tom.

"Why fer moonshining of course."

"But you haven't been caught moonshining. Nobody in camp can accuse you of that or any other crime. Anyhow if you fellows will help me to camp with this bear I pledge you my honor that I'll stand by you and see to it that you're not arrested."

"That's 'nuff sed," said Bill Jones. "Little Tom never goes back on his word, an' he knows how to manage things. We'll take the bar to camp."

The men assented but with hesitation and obvious reluctance. Seeing their hesitation Bill Jones spoke again:

"Now I tell you, you needn't worry the least little bit. I know whereof I speak, as the Bible says, when I tell you that you kin bet all you've got on Little Tom Ridsdale. When he says a thing he means it an' when he means it he'll do it ef all the eggs in the basket gits broke."

"Thank you Bill," said Tom. "Anyhow I'll see that you fellows get safely out of our camp or else I'll go with you with my rifle in my hand."

The men seemed satisfied. Seizing the bear they dragged it campwards as the daylight began to grow strong. Before Camp Venture was reached the sun was well above the horizon, and as they approached Tom gained some notion of what had happened there and of what the blaze of the night before had signified. But well outside the camp his mountaineers dropped the bear and bade Tom good bye.

Not a vestige of the house in which the boys had lived all winter remained. Only the smoke of a still smoldering fire marked the place where it had been.

CHAPTER XXXV

The End of Camp Venture

DURING the night of Tom's bear hunt, the boys slept soundly, wearied as they were by an especially hard day's work. About three o'clock a soldier from out under the bluff rushed in crying:

"Wake up! Wake up! Wake up! Your chimney's on fire!"

Then came the Lieutenant with a squad of soldiers to remove the wounded men from the hut. This was a work of some difficulty although all the men were now "making satisfactory recovery" as the Doctor phrased it. The Doctor took charge at this point because he knew as no one else did the exact nature and condition of each man's wound, and it was his care to see that none should be improperly handled or in any way injured in the removal. Yet the house burned so rapidly that there was very little time for care and the excited soldiers had to be sharply restrained by the Lieutenant to make them comply with every

direction of the doctor in their handling of the wounded men.

Meantime the boys removed from the house everything of value, including even the "piano," which they would need every day for the sharpening of their axes.

What had happened was this: the upper part of the chimney, as the reader will remember, had been built of sticks, laid in a crib, and daubed all over with mud. The sticks were green, full of sap and almost incombustible when placed in position, and besides that the mud daubing protected them. But little by little the mud had dried and fallen away. While the heat of a fire that was maintained night and day for many months had seasoned the sticks first and then dried and parched them to the condition of tinder, capable of being ignited by the merest spark.

That night the spark did its work. The chimney sticks caught fire and burned with fierce violence. The clap boards forming the roof and the resinous pine timbers that held them in place, had also been roasted into an exceedingly combustible condition, and by the time that the fire was discovered the house was obviously doomed. That was the origin of the light that Tom had seen in the direction of Camp Venture while waiting for his bear.

When he now entered the camp he found the boys getting breakfast by an out door fire, built near the mouth of the chute.

"Poor old Camp Venture!" he exclaimed. "How did it happen boys?"

They hastily explained especially answering Tom's eager questions as to the condition of the wounded men.

"They are quite comfortable," said the Doctor. "all possible care was taken in removing them from the burning house, and my examination discovers no trace of damage done to any of them. But where have you been and what have you brought back with you?" for Tom had no game in possession.

"I've been to the home and headquarters of Ursa Major, and I've killed him," answered Tom. "I want to borrow the Lieutenant's glass to-night to see how the heavens look without the constellation of the Great Bear."

"What do you mean, Tom?" asked the boys eagerly.

"Why simply that I have killed the biggest black bear I ever saw or heard of in these mountains."

"Where is it?" eagerly asked Jack, who had a great longing for fresh meat for breakfast that morning.

" It's out there just beyond the picket lines, and some of you must go after it. You see the mountaineers who ' held me up ' and then made friends with me, agreed to bring it to camp under my solemn promise of safe conduct. Bill Jones was at the head of them. But as they drew near the camp and saw the pickets, their courage failed them and even my invitation to come and breakfast with us, could not entice them within the picket lines.

" ' We don't want to take no risks,' they said, ' an' you kin bring out some fellers to git the bar, so ef you don't mind, we'll leave it right here an' say good mornin'.' And with that they scurried off up the mountain."

Jack, Harry, Ed and Jim volunteered to go out after the bear, and with no little difficulty they at last got him to camp, where they proceeded to dress him. Tom, in the meantime, ate such breakfast as there was on hand, and, rolling himself in his blanket, stretched his tired limbs before the fire and fell at once into slumber. The other boys left him asleep when they went to their work, but considerably before noon he joined them with his axe.

That night a " council of war," as they called it, was held.

" Now that our house is burned up," said Jack,

" we may as well begin to get ready for our descent of the mountain. Of course, we could sleep out of doors in this spring weather, but there is no use in doing it longer than we must. We sent the last two bridge timbers down the chute to-day. We have only twenty more ties to get ready and if we work hard we can do that to-morrow and next day. That will leave us nothing more to do except to work up the waste into cordwood and send it down. My calculation is that we can leave here one week from to-morrow morning if we are reasonably industrious. Tom's bear and the other game he'll get, will keep us in meat for that time, and if the doctor can leave his patients a week hence, we'll go."

" Oh, as to that," said the doctor, " I could leave them now. They need nothing now but nursing, and it won't be very long after we leave before the road will be open for the lieutenant to send them all down the mountain."

Thus with glad thoughts of a speedy homing, the boys rolled themselves in their blankets and stretched themselves out to sleep by the fire and under the stars.

" By the way, Tom," said Jim, just as Tom was sinking into slumber, " you forgot to look for that hole in the sky that you made last night."

" Well, you'd better make a hole in your talk

pretty quick, Jim, if you don't want a bucket of water poured over you," said Jack. "Lie awake as long as you like, but keep quiet and let the rest of us sleep."

CHAPTER XXXVI

A Start Down the Mountain

JUST a week later the boys were ready to quit Camp Venture and proceed down the mountain, or as Tom, quoting the mountaineers, put it, they prepared to "git down out'n the mountings."

They had fully accomplished their mission. They had done a great winter's work. They had sent down the mountain every tie they were permitted by their contract to furnish; they had sent down many noble bridge timbers and greatly more cordwood than they had expected to cut. Their work was done, except that before going home they must go to the headquarters of the railroad contractors, at the foot of the mountain, adjust their accounts and collect the money due them.

As the best mountain climber among them, the one who had met and overcome more mountain difficulties in his time than any other, and the one who best knew how to "look straight at things

and use common sense," Tom was chosen to direct the perilous descent over the cliffs.

The boys were all heavily loaded, of course. Each had his axe, his blanket, his extra clothing and four days' rations to carry. Each also had his gun and there was one extra gun—the rifle that Tom had captured from the mountaineer—to be carried. "For," said Tom, "while we have no use for the gun, I've agreed to deliver it to its owner whenever he chooses to call for it at my mother's house, and I tell you, boys, a man's first obligation in this world is to keep every promise that he makes no matter what it costs. I'd take that fellow's rifle down the mountain if I had to leave my own behind in order to do it."

"You are right, Tom," said the doctor, "and boys, I propose that we take charge of that gun and carry it turn and turn about for Tom, for he is otherwise the worst over-loaded fellow in the party."

For Tom had his skins to carry—the panther's hide, three big bear skins, several deer hides, and a large number of pelts from raccoons, opossums, hares, squirrels and other small game.

"In fact," said the doctor, "I move that we throw Tom down, take away his load, and divide it equally among the entire party."

"That's it. That's the way to manage it!"

cried the boys in chorus. But Tom would hear of nothing of the kind. "You fellows may help me with the mountaineer's rifle, if you choose, but I'll manage my bundle of skins for myself. Thank you, all the same. After all, our luggage isn't going to bother us half so much, going down the mountain this way as it would if we went down by the regular trail."

"Why not, Tom?" asked Jack.

"Well, I'll show you after awhile," said Tom. "And in the meantime, Doctor, I'm going to take all your delicate and expensive scientific instruments, and myself pack them so that they will endure the journey without injury. If carried as you have them, there wouldn't be one of them that wouldn't lie like a moonshiner by the time we 'git out'n the mountings.' Let me have them, please."

The doctor, curious to see what the boy was going to do, turned his instruments over to him and carefully observed his proceedings. Tom began by selecting a number of the smaller skins, which, instead of drying, he had "tanned" with brains, corn meal-rubbing and other devices known to him as a hunter. These were as limp and soft as so many pieces of muslin, but greatly tougher. With them Tom carefully wrapped each instrument separately, securely tying up each

with string, which the boy seemed always to have hidden somewhere about his person in unlimited quantity and variety of sizes and kinds.

"That's a trick I learned in hunting," he said, when questioned. "You can never have too much string with you."

Next he packed these bundles together, interposing dried and stiff hides between the several parcels, and again securely tied them together. Then he took the hide of his "Ursa Major," which was still "green" and limp, and which, as the boys suggested, "smelt uncommonly bad," and rolled the whole bundle in that, "skinny side out," binding it securely with stout twine. Finally he wrapped the stiff dried hide of the first bear he had killed, and the equally stiff panther's hide over all, as a sort of "goods box," he said, and, with a piece of red keel, he playfully marked on the panther's skin, "Glass! Handle with care."

"But now who is going to carry all this load?" asked Jack.

"Tom and I," said the Doctor, quickly. "The skins are Tom's and the instruments are mine. So we'll take some more of Tom's string and rig up some handles by which he and I can carry the bundle."

"You see," said Tom, "we may possibly have to drop it over a cliff now and then, and I've tried

to do it up so as to stand that without breaking the instruments. But I think we can manage to avoid that. At any rate, we'll try. Now, come on, boys."

They had already taken leave of the lieutenant, and with four days' rations in their haversacks—for the lieutenant had supplied them with those military conveniences—haversacks—they began the descent of the mountain by that difficult way that Tom had followed on the night when he inspected the stills.

It was nine o'clock when they started. They made their way with comparative ease for nearly an hour. Then they came upon a bluff of formidable proportions and difficulty. Here Tom's experience and generalship came into play for the first time.

"All lay off your loads," he said. "Now, Harry, you are a discreet fellow and a good climber. Strip yourself of everything that can possibly embarrass you, and go down over the bluff. Remember what I have told you about bushes. Some of them cling tenaciously, while some of them give way in their roots at the first serious pull. Never trust one of them, but hold on by two always, and support yourself by your feet on every projection of rock you can find, so as not to overtax the bushes. When you are

holding by two bushes, never let go of one to catch another lower down till you have satisfied yourself of the security of the other one by which you are holding on, and then grab the new one as quickly as you can. Make your way to the foot of the cliff, and we'll then let all our baggage and arms down to you with twine. You are to receive it all, untie the twine and let us pull it up again for the next bundle. When all our luggage is down, we'll climb down ourselves. There isn't any serious difficulty about it if we're careful. As I told you boys awhile ago, there isn't any such thing as accident. It is all a question of carefulness."

Harry did his part well in making the descent of this first precipice and the work of lowering the arms and luggage, including every boy's haversack—for it was imperative that in the bush climb down the cliff, no boy should carry a single ounce of unnecessary weight—occupied full two hours' time.

The doctor was the last to go over the edge of the precipice, and he alone met with mishap. Jack, with his heavy weight, had preceded him, and the bushes, already weakened by the strain the other boys had given them, were some of them almost torn out by the roots from the rock crevices in which they grew. So when the doctor was

about half way down, one of them gave way suddenly, leaving the doctor's right hand with no support and swinging him around in very perilous fashion. But the doctor had by this time become a good deal of an athlete, and instantly realizing his danger, he swung himself around on his toes, which rested in a crevice of the cliff, and grasped with his right hand a sharp edge of rock which protruded some inches from the face of the cliff. It was a perilous hold, as the boys, looking on from below, clearly saw, and one that obviously could not be long maintained. But the doctor had his wits about him, and after a moment's pause, he grasped another bush which held securely, and five minutes later he was on the ledge below.

Here it was decided to halt for the midday meal. A fire was built; the game which had been brought—or at least so much of it as was needed for this meal—was broiled upon live coals, and a pot of coffee was made—for of that sustaining article the original supply had not yet been quite exhausted.

CHAPTER XXXVII

Down the Mountain

BY this time the boys were excessively tired. Climbing down over bluffs is weary work. So after dinner they stretched themselves out for a nap with their bundles under their heads in lieu of pillows.

An hour later they roused themselves and set out again upon their toilsome journey, carrying their packs as best they could, and scrambling through underbrush and over fragments of rock that had fallen from the cliffs and hills above and now seriously obstructed the passage.

At last they came to the shelving rock, mentioned in a preceding chapter. This was a perfectly bare stretch of rock, extending down the hill for nearly a quarter of a mile, at an angle which made walking upon it impracticable.

"Now, fellows," said Tom, "get your parcels together and slide them down the hill. The thick woods and bush tangle at the bottom of this rocky incline will bring them to a halt. Then I'll go

down alone and find out if the way is practicable. If I get down in safety the rest of you can follow, doing precisely as you've seen me do."

"But, Tom, I protest," said the doctor. "You mustn't take all the risk."

"Oh, you'll have risk enough for your own share," answered Tom, "after I've done the trick. It's only that I've done this sort of thing before, and can show you fellows how. In the meantime, send the parcels down."

Then one after another, the shoulder packs were started and went speedily down the rocky incline and into the woodlands at its foot. The guns, of course, were not risked in this fashion, but were securely strapped upon the shoulders of those who were to carry them.

When all the luggage had been sent down, Tom began his descent, calling to the others:

"Now watch me carefully, boys, and see just how I do it."

He went down, face to the ground, and feet first, sliding, with legs and arms spread out, to offer all possible resistance to gravity, and with his toes clinging close to the rock to catch every little inequality and thus check his speed. Now and then he would encounter an obstruction that brought him to a full stop. When that happened, he rested awhile, and then resumed his slide. It

was hard work, accompanied by no little peril, and the boys did not breathe freely till Tom reached the bottom, stood up and waved his hat in token of his victory over the difficulty.

Then one by one—for Tom had forbidden any two of them to start down at the same time—they all made the descent in the same way, "without giving the doctor a single job to do," said Tom, when all was over. But their clothing was very badly damaged in the descent, and the hands and knees of some of them were considerably torn.

They were now in a very thick woodland, crowning a gently declining hillside, and, after gathering their properties together, they marched forward for an hour, descended another bluff, and decided to encamp there for the night. The distance to the foot of the mountain was now comparatively small, but the surface was badly broken and precipitous, and as darkness was not far off, it was deemed better to wait until morning before completing the journey.

On the way through the woodlands, the doctor had surprised and shot a turkey, and it must of course be roasted, so the first thing to do was to cut some wood and build a fire. For that a spot was selected just under a slate rock bank that formed a cliff near where they had decided to camp. The water which oozed out at the bot-

tom of this slate rock bank on its western border, and formed a convenient pool there, did not prove to be good. It tasted of various minerals, iron and sulphur among them, and was distinctly unpalatable. Fortunately, Jim discovered a spring at a little distance, however, which was found to be good. Springs were everywhere on this steep face of the mountain, bearing to the surface the water from the snows that fell in the higher lands above, sank into the ground, and percolating through rock fissures, found its way to daylight again wherever a crack or seam in the rock permitted.

So the coffee pot was soon ready for the fire where the turkey was already roasting, and by the time that night fell, the supper of roast turkey, hot biscuit and steaming coffee, was ready, and the weary boys were looking rather eagerly forward to the time when the meal should be so far past as to permit them to lie down again to sleep.

As they ate they chatted, of course. The homegoing had begun, and indeed its most serious difficulties had already been overcome. Their enthusiasm was again aroused and they again felt interest in whatever subject might come up for discussion. But first of all, they made Jack figure up their winter's earnings—exclusive, of course, of Tom's skins—and they were very well satisfied

indeed with the results of his figuring. Their outfit in the autumn had cost them very little, and since then they had been at no expense whatever except that they owed the doctor their several small shares of the money he had given to Bill Jones and of the two dollars he had advanced to Tom for the purchase of meal on the mountain; for, of course, they all insisted upon sharing that expense, and Tom had no reasonable ground for refusing.

An hour after supper all lay down to sleep, after replenishing the fire under the slate rock bank, for there was no danger from moonshiners down here so near the foot of the mountain.

CHAPTER XXXVIII

Old King Coal

IT was nearly morning when the boys, wrapped in their blankets, began to stir uneasily and kick at their coverings. Every one of them was oppressed with heat, but for a time, weary as they were, they did not fully come to a consciousness of what it was that disturbed them.

After awhile Jim sat up, stripping off his blanket and giving vent to his feeling in the half word, half whistle, "Whew!" He looked about him for an instant, and then hastily jumping up, called to his half-awake companions:

"I say, fellows, wake up, quick. The slate rock bank is afire!"

It was true enough. As the boys shook off the cobwebs of their dreams, they discovered what it was that had been overheating them in their sleep. The whole bank under which they had built their fire was ablaze and throwing out an intense heat.

The doctor was the first to grasp the situation. "Drag the fire away from the bank as quickly

as you can, boys!" he cried. "Fortunately the wood is nearly burned out."

That done, the cliff continued to blaze and sputter and the doctor, who had seized authority and taken control of affairs, called for water.

"Bring it in your hats, boys, or anything else that will hold water, but bring it quick!"

The boys obeyed with alacrity, and when the water came, the doctor made them cast it only upon the lower parts of the burning cliff.

"We get a double advantage that way," he explained. "We put out the source of the fire, which originates at the bottom, and the steam that rises from water thrown there helps to dampen the fire above."

But the burning had made such progress that it required quite two hours to put it out. When that was done, daylight having completely come, the boys addressed themselves to the work of getting breakfast, by a new fire kindled at some distance from the lately burning bank. The doctor, meanwhile, was pottering around the bank, breaking off bits of the formation with his little geological hammer, and seriously burning his fingers in efforts to examine them critically.

Finally he seized his axe and with an entirely reckless disregard of its edge, he began chopping into the bank. Even when breakfast was an-

nounced, he would not quit his exploration for a time.

"The doctor seems interested in that cliff," said one of the boys.

"Yes, and he's ruining the edge of his axe upon it," said another. "I suppose he has found something of geologic interest there."

Just then the doctor quitted his work on the bank, removed his hunting shirt, tied it up by the neck and filled it full of the blocks he had chopped out of the bank. It held about half a bushel. Going to the fire, he emptied the mass upon it, and watched for results with eagerness. The slate rock, as the boys had called it,—burned slowly and gave out a good deal of heat.

Then the doctor addressed himself to his breakfast, but he ate in silence. After he had done, he said to Tom—for he and Tom had become special cronies—"Tom, I wish you would take two of the boys with you this morning, go down to the railroad camps and buy four or five picks and four or five shovels."

"Certainly, Doctor," answered Tom. "But what is it you want with the picks and shovels?"

"I want to dig into that bank. I want to find out whether what I suspect is true or not."

"What is it you suspect, Doctor?" asked Jack eagerly.

"I suspect that that slate rock bank is the outcrop of one of the very richest coal mines in America. I may be wrong, but if you'll go down and get the picks and shovels, we'll soon find out."

"But why not all go down and bring back some miners with us?"

"Because we don't want any miners and especially we don't want anybody to 'jump our claim'—that is to say, to come here and claim a royalty on the plea that he first discovered the mine. Boys, I don't think we'll any of us get home as soon as we expected. This is something worth staying for, and fortunately we are now within easy reach of supplies."

"But we haven't any money with which to pay for them," said Harry.

"I'll take care of that," said the doctor. "Do you happen to remember that the contractor who is to pay you boys for your ties and cordwood and bridge timbers, is named Latrobe?"

"Why, yes, certainly," said Tom. "But I never thought of that. Is he a relative of yours?"

"Only my father," answered the doctor. "I don't think we shall have any difficulty in purchasing any supplies we need while guarding this 'slate rock' mine."

After further conversation it was arranged

that the doctor should send a note by Tom to the elder Latrobe, asking him to send up tools and food supplies. He wrote the letter on a leaf or two torn from his note book and delivered it into Tom's hands.

"Now, Tom," he said, "as you go down, suppose you study the ground carefully and see if you can't pick out a route by which you can bring a wagon up. If so, my father will load it with provisions and it will carry much more than many pack mules could. On the whole, I think you'd better go alone. I suggested taking two others with you, to help carry the tools, but you'll bring them in a wagon, or if you can't find a wagon path, you'll bring them on pack mules. But find a wagon track if you can. Take your time going down. You can't get back much before to-morrow night, anyhow, and it is important to secure a wagon way if possible."

"All right," said Tom. "But, Doctor, why do you think this is good coal? It looks to me like very poor stuff, and certainly it doesn't burn like good coal."

"O, that's because it is outcrop, and outcrop coal is always poor stuff. It has been so long exposed to the weather that it has lost most of its combustible constituents. Sometimes it will not

burn at all. But I think this the outcrop of a very fine vein of coal, because from its location and from what I can discover of its formation by examining pieces of it, I think I know the ' measure,' as they call it, to which it belongs. If I am right in this, we have here a vein of the very best and purest coal in the world for making steam, for direct furnace uses and for making coke. But come, we have no leisure now for talking about coal or anything else. We want picks and provisions the first thing. So pack your haversack, Tom, and hie you away."

" I will on one condition," said Tom.

" What is that? " asked the doctor.

" That you won't talk about Old King Coal to the other fellows till I get back," answered Tom. " I have at least ten thousand questions to ask, and I simply won't go for provisions if you're going to answer any of them while I am gone."

" I promise, Tom," answered the doctor, laughing. " I won't even mention His Majesty King Coal, till you return and I'll scalp any boy in the party who asks me a question on that subject while you are away. Now, be off. Take plenty of time. We'll kill a little game now and then, and we have enough flour to last us till you get back. The important thing is for you to get a

wagon load of supplies up here, and you must do it if it takes a week."

"I'll do it," answered Tom. "Good by, fellows!" and the boy started off down the hill.

CHAPTER XXXIX

The Doctor Sings

AS soon as Tom was gone, the doctor turned to the others and said:

"Come, boys, we must get to work."

"What have we got to do?" asked Jack.

"Why build the new Camp Venture, to be sure. Don't you understand that we're to stay here perhaps for a month, and must protect ourselves against the spring rains? We must build a shelter before Tom gets back."

"But, Doctor," interrupted Harry, "why should we stay here for a month?"

"Why, don't you understand," said the doctor, "that we have discovered, right here on your mother's land, a coal mine that will certainly make her comfortable all her life and probably make you boys rich. We've got to find out enough about it to enable us to exploit it, and that will take a month at least."

"But tell us about the coal," said Jack.

The doctor replied by singing:

"Old King Coal
Was a jolly old soul,
And a jolly old soul was he;
He called for his pipe and he called for his bowl,
And he called for his fiddlers three.
Every fiddler had a fine fiddle
And a very fine fiddle had he,

but," continued the doctor, "not a man jack of them would tune up for Old King Coal till little Tom got back, because they had promised Tom not to set the fiddles going in his absence. That's a parable. It gives you fair warning that I'm going to keep my promise to our dearest comrade, Little Tom, and tell you nothing about this or any other coal till he comes back. But I tell you we shall have to stay here for a month at least, and that we need some sort of shelter against the heavy spring rains. So come, Jack, you are our architect. Tell us what sort of house to build."

Jack thought a few minutes, after which he said:

"We shan't need a house; at this time of year all we need is a shelter, closed in on three sides and open to the fire in front. We can build it of poles and cover it with a thatch of pine branches and other brush thick enough to shed the rain."

"But if we have only three sides to our house,"

said Jim, "how are we to keep the ends of the poles in place?"

"Oh, that's easy," said Jack. "We'll insert short bits of pole between them, with deep notches cut into them; and we needn't chink or daub at all. We ought to be able to build quite all the shelter we need, to-day and to-morrow, particularly as we are in a thick grove of young trees, just the size that we want for our poles. Get to work, every fellow of you, and cut poles with all your might."

Just then a thought occurred to Jack, and he took the doctor aside for consultation.

"Doctor," he said, "It occurs to me that this coal mine, if it is a coal mine, is on my mother's land and that therefore it is worth my while and Harry's and Tom's to stay here and work up the possibilities of the case. It is also worth your while, because you are in fact the discoverer of it and my mother will naturally recognize your interest in it, especially as we shall look to you to find capitalists to work the thing."

"Oh, I'll do that, of course. If I'm right about the mine, I'll have no difficulty in finding plenty of capital. The mine is at exactly the right place, and as to my interest, I'll take care of that when I come to negotiate with the capitalists. I'll see to it that they allow me a proper

commission for 'bringing the property to their attention,' as they phrase it. So don't bother about me."

"No, but I'm bothering about Ed. and Jim. If they are to stay here and help us for a month or so, they must be paid in some way."

"Of course," answered the doctor. "I've been so long thinking of our party as a unit, whose constituent members 'shared and shared alike,' that I had not thought of them as persons not interested in this new Camp Venture. Let me think a little!"

He bowed his head upon his hands for a time in meditation. Then he said:

"Of course your mother cannot work this mine herself. It will need at least a hundred thousand dollars of capital to make it productive—perhaps twice that sum. I know enough of the situation to know that I can arrange that without going out of my own family. My father and my brothers will put in the entire sum necessary—for I tell you there is a vastly valuable property here,—and will allow your mother her proper share of the stock for the mine itself. I'll arrange all that to her perfect satisfaction before anything is concluded. Indeed, I must do that. Otherwise she would naturally make somebody else her agent."

"Oh, she'll trust you, Doctor," interrupted Jack.

"It isn't a matter of trust, it's business," answered the doctor. "But on purely business principles we shall be able to arrange for your mother to put in the property and my friends to put in the money capital. I shall not ask your mother for a cent, for she has been like a mother to me ever since I came down here for my health and began boarding with her. My own people will allow me out of their share, a sufficient interest to compensate me. Now, I undertake also that they or I shall allow to Ed. and Jim, half a share each in the mine, supposing it to be capitalized at a hundred thousand dollars, in return for their services while we have to stay here."

"No, Doctor," said Jack, "I will not hear of that. If you'll furnish one-half share, I engage that my mother shall furnish the other. That will divide the thing equally."

The doctor, seeing the entire justice of this arrangement, assented to it, and the two called Jim and Ed. into the conference. When they laid the proposition before the pair, it was joyfully accepted. Ed. said:

"Even without that, we shouldn't have left the camp. We fellows have had so good a time together that I, for one, would have stayed and done

my share of the work, with or without a financial interest in it."

"So should I," said Jim, enthusiastically. "Now that we are to be capitalists and stockholders and all that sort of thing, it will require all our self restraint not to grow cocky and refuse to work. Still there are a lot of poles to cut for the new shelter, and if you two fellows are going to stay here all day and talk, the rest of us must work all the harder."

"We're going to work at once, Jim," said the doctor. "But I want you to understand that in my judgment this mine is going to be a great property, and that your share in it will go far to make you prosperous men."

Then Ed broke down. He had lived a hard life, trying to aid his widowed mother by such work as he could do, and this prospect opened to him, of a little income independent of his work, overcame him with emotion as he thought of the good mother released perhaps from the necessity of hard toil for the rest of her life. The simple fact is that as Ed turned away to hide his emotion, the tears rolled down his cheeks. But if he sobbed, it was not until he had gone down the hill well beyond the ledge of broken stones that marked the boundary of the camp.

When night came, the eager boys began again

to question the doctor about coal and coal mines. To every question, he replied by singing "Old King Coal," and declaring anew his resolute purpose not to talk at all on that subject till little Tom's return. But the doctor was jubilant all the same, and he said presently, "His Majesty King Coal is a very generous monarch and he is going to make all of us well to do if not actually rich." Then he broke out again into the song:

"Old King Coal
Was a jolly old soul,
And a jolly old soul was he;
He called for his pipe and he called for his bowl,
And he called for his fiddlers three."

CHAPTER XL

Tom's Journey

TOM had not gone far on his journey before he discovered that the new Camp Venture was in fact situated very nearly at the base of the mountain. The headquarters of the railroad people lay a mile or so to the west, and perhaps two hundred feet or so lower. But along the foot of the hill was accumulated all the debris that had come tumbling down the steep for ages—great and small fragments of rock split off the cliffs above by the frosts of a multitude of winters and now piled haphazard wherever they could find a resting place.

In the midst of such a mass of rocky debris, now thickly overgrown with forest trees, Tom at first despaired of finding a practicable wagon path. But he toiled diligently at the task, retracing his steps many times and little by little tracing out a way, which he marked as he went by cutting branches of trees and setting them up as landmarks to show him the way when he should return with a wagon load of supplies.

All this occupied so much time that Tom did not reach his destination that night, but slept by a little fire on the mountain side.

In the morning there was a drenching, discouraging spring rain falling with pitiless persistence, and Tom's clothing and blanket were soaked through, and his limbs were stiff with cold. Fortunately his fire had not been entirely extinguished by the rain, and when he had replenished it with seasoned branches, and steamed himself in its glow for a time, his energy returned, and he cooked and ate a scant but refreshing breakfast which included the two drumsticks of the Doctor's turkey. These had been roasted the night before, but Tom threw them on the coals to broil a little. "I prefer a hot breakfast," he said, "particularly on a morning like this. How I wish I had a cup of coffee!"

Then gathering up the few things that he carried, he left his camp fire and continued his task of picking out a way by which a wagon might be dragged up and along the rocky hill. It was high noon when he reached the little railroad station where Dr. Latrobe's father had established his headquarters as a contractor. Tom was enthusiastically received by that gentleman, who was naturally pleased to hear news of his son's thoroughly restored health. There was a little tavern

already established near the station and there Tom was made to dry and warm himself. Having assured Mr. Latrobe that he could conduct a loaded wagon up the hill to the new Camp Venture, Tom speedily left his occupation of warming himself and joined the older gentleman in choosing the materials that were to constitute the load. Mr. Latrobe had assigned for the purpose a heavy, stoutly built wagon, capable of enduring rough road service, and to Tom he said: "I've sent a little way down the line for four of the stoutest mules we have, to draw it, and for a driver who is used to mountain work. They will be here this evening and in the meantime we'll get the wagon loaded, so that you can make an early start in the morning." This suited Tom's plans exactly, and he set himself at work at once selecting from the contractor's stores, the things most desirable for his purpose.

There were ten large sides of bacon; half a barrel of sugar; half a barrel of molasses; half a barrel of corned beef; several hundred pounds of corn meal and a like quantity of flour in bags; a bushel or two of salt, and a good supply of potatoes, turnips, cabbages, canned vegetables and fruits with which to break the long monotony of the camp diet. Mr. Latrobe insisted upon adding some prunes, dried peaches, dried apples, and

some other things that he thought the boys would enjoy. Finally a large box of coffee already ground and put up in damp-proof packages, was placed in the wagon, together with ten pounds of tea.

"You see I've done a great deal of camping, my boy," said the genial gentleman, "and I know how much of comfort there is in tea and coffee when you're rain soaked."

All these things were packed into the wagon by some of Mr. Latrobe's men, and securely lashed into immovability with stout hemp ropes. Over them a tarpaulin was spread to protect them from the rain and on top of that the picks and shovels were lashed into place.

The wagon was ready and that night Tom slept in a real bed for the first time in nearly half a year. But he was up at daybreak and off on his journey before the sun's appointed time for rising. Whether or not that luminary left his couch when he should, Tom had no means of finding out, for it was still heavily raining.

It was a toilsome journey that lay before him and Tom foresaw that it could not be accomplished much before nightfall, even should no delaying mishap occur, and therefore he disregarded the rain and insisted upon the earliest possible start.

It was Tom's function to walk ahead of the wagon, look out for the landmarks he had set up, and point the way to the driver who, armed with a long black snake whip, rode upon the "near," or left hand, wheel mule. But the driver was his own sufficient adviser as to how to overcome such obstacles as were met, and Tom was greatly interested to observe the skill and good judgment with which the man did this.

"There is science," he said, "in everything, even in driving a wagon over a rough mountain where there is no road."

But Tom got no response from the driver, who seemed a taciturn fellow, and who in fact never once spoke during the journey except to scold his mules with shocking profanity. Even when he decided to halt about noon to feed the animals, he said not one word to Tom, but simply stopped the wagon, unhitched the mules and gave them their food, hitching them up again when he thought it proper to do so and resuming his journey.

"Obviously," thought Tom, "that fellow has been used to driving alone. I wonder if he has forgotten how to talk? Or is it that he never thinks? Even the weather doesn't inspire him to make a remark, for he hasn't once asked my attention to the fact that the rain has ceased and that

the sun is breaking through the clouds. He certainly can't be classified as a companionable personage, but at any rate he knows how to manage mules and get a wagon over difficulties, and after all that's what he is employed to do. He gets on wonderfully, too, considering the difficulties of the road. I suppose it is like the case of the man who tied his cravats so beautifully because, as he said, he 'gave his whole mind to it.'"

So, silently they proceeded on their way and just before sunset the wagon was stopped on the outskirts of the new Camp Venture.

The boys all rushed out to greet Tom and compliment him on his skill and success in bringing the supplies over so difficult a route. Tom greeted them all in turn, and then said:

"Try your hands, boys, and see if any of you can extract a single unnecessary word from that driver. I haven't been able to get anything out of him except vituperation for his mules."

The driver meanwhile was stripping his mules of their harness and arranging to give them the oats and fodder that he had brought with him for their use.

The Doctor filled a tin cup with coffee—for the boys had heard Tom coming and made supper ready against his arrival—and carried the steaming liquid out to the driver whose clothes

were still sopping wet, and offered it to him, saying:

"You are very wet and it must have been a hard struggle to get your wagon up here. Drink this to warm you and when you get your mules fed, come to our fire and have some supper. You must be hungry."

The man took the cup, drank its contents, handed it back to the Doctor and muttered the single abbreviated word, "'Bleeged," by which the Doctor understood that he meant, "I am obliged to you."

Finally the man having disposed of his mules for the night, came to the camp fire for his supper. He received it in silence and proceeded to devour it like the hungry man that he was. Still he uttered not a word. At last Jim Chenowith tried his hand at drawing him into conversation.

"It must have been pretty tough work to get a wagon up here," he said, tentatively. The man said not a word in reply. This exasperated Jim and presently he stood up before the wagoner and angrily demanded:

"What's the matter with you? Why don't you answer a civil question?"

To this the man answered, "Hey?" at the same time putting his hand to his ear in a futile effort to understand.

" The man is almost stone deaf," said the Doctor. " That is the explanation of his silence."

Tom laughed at himself for not having made this discovery, and then crept into the bunk prepared for him in the new camp house.

CHAPTER XLI

"His Majesty, the King"

THE Doctor was an advocate of leisurely eating, but he impatiently hurried the boys through their breakfast the next morning and set them at work upon the bank with picks and shovels. He explained to them as he had before explained to Tom, that "outcrop" coal—that is to to say, the edge of a coal seam exposed by any circumstance and left long exposed, deteriorates in quality and value.

"All the combustible parts of this exposed coal have been evaporated," he said, "until now the stuff is worth scarcely more than so much shale. But unless my knowledge of geology fails me, there lies behind this stuff, some of the very richest coal in Virginia. Our task is to dig in here and find out whether we have here a valuable coal mine or nothing at all."

"Suppose it is the kind of coal you think, Doctor," said Jack, "what is such a mine worth?"

"Nothing and everything. It all depends upon circumstances. A year or two ago the finest

coal deposit in the world, located where this is would have been worth no more than the detritus from the hill that is piled up all around here. Such a mine at this place now, is incalculably valuable."

"But what makes so vast a difference?" asked Ed.

"The railroad," answered the Doctor. "A year ago this coal would have been worthless, simply because there was no market for it anywhere within reach. Now the railroad brings the market to the mouth of the mine, as it were. But come, let's get to work. If you want me to talk about King Coal, I'll do it to-night after supper. Just now we must dig for his majesty." Then he grabbed a pick and broke out again singing—

> "Old King Coal
> Was a jolly old soul," etc.

The boys dug with a will and by nightfall they had dug away three or four feet of the face of the cliff. Every now and then the Doctor would take a bit of the exposed coal and examine it critically under a strong magnifying glass. Every time he did so, he broke out again into the song about "Old King Coal." The boys had never seen him so jubilant.

When they quitted the work and began to pre-

pare supper, the Doctor went into the shaft they had started, broke out a bushel or two of the deepest coal yet reached, and placed it on the fire. He watched it intently as it burned, and just as supper was ready he said:

"We've got it, boys, and no mistake. This is a great mine of the very best coal in the world for making gas, steam and coke, and as these hills are full of iron ore, the mine is precisely where it ought to be. When we dig a little further into that bank we shall come to coal that can be shovelled into a furnace with iron ore on top of it, and used to smelt iron without the trouble or expense of coking. Or we can make as good coke of it as there is in the world, and the vein is eight or nine feet thick, which means a lot, and it has a perfect rock roof, which means a lot more, and the volcanic upheaval which shoved it up here has kindly so placed it that it trends upward, so that in mining it we shall not have to do any pumping. All we've got to do is to dig trenches on each side of our coal car tracks and let the water run out by force of gravitation. I tell you boys, we've discovered the most valuable coal mine in all this region, and as if to make matters still better, it lies just high enough up the mountain to enable us to chute its product down to the railroad without any expense whatever for hauling."

"Well now," said Jack, "all that is good news. But we boys don't understand the thing the least bit. So you are to explain it to us after supper. You are to stop singing 'Old King Coal' and explain to us upon what grounds his majesty's authority rests."

"All right," said the Doctor, with truly boyish enthusiasm. "After supper I'll tell you all about my liege lord Old King Coal. Meantime won't somebody give me another cup of coffee and about a dozen more rashers of that paper-thin bacon? I'm hungry."

Jack replenished the Doctor's cup, and Ed. cut for him a dozen or twenty very thin slices of bacon, leaving him to broil them for himself on the end of a stick and devour them as fast as they were broiled. Tom divided a pone of corn bread with him and the supper proceeded to its conclusion.

"Now then," called Tom, when the tin plates and tin cups had been washed and set up on the wall shelf which the Doctor had made for them, "we're ready to hear all about 'Old King Coal' and his claims upon our allegiance."

"Oh, no you're not," said the Doctor. "It would take me weeks to tell you the little I know on that subject and something like a lifetime for anybody who knows more to tell you 'all

about ' King Coal. But I'll tell you a little any how."

" First of all tell us why you call it ' King Coal,' " said Ed.

" Because in our age it *is* king," quickly answered the Doctor. " Without it every one of our industries would come to an end; every factory would stop; every steamship would be laid up forever; every electric light would go out; every railroad would become ' two streaks of rust and a right of way '; in short the whole fabric of modern civilization would tumble to the ground. You see every age has its key note. When men had no better implements than rough stones those people who had most stones were the easy conquerors of the rest. When they began to fashion stones into arrowheads, axes and the like, the people who lived in stony countries had a still greater advantage. When men learned to work metals—well you see the way it went. In the pastoral ages the man whose land produced most grass was the ' king pin ' of his community and owned more cattle than anybody else. In the military ages the people who fought best were the supreme ones, and the rest were their dependants. In ecclesiastical ages the great prelates dominated, and so on through a long catalogue. Now ours is an industrial age and coal lies at the very root of product-

ive industry. Without it we can't make steam or get power enough for any of the vast enterprises of modern civilization. It smelts iron out of rocks that would not give it up without King Coal's command. It enables us to make steel and to fashion metals to answer our requirements in a thousand ways. It runs our steamships, our factories, our railroads and pretty much everything else that we depend upon to make life easy, to enable us to interchange our products with people at a distance and generally to make ourselves comfortable. In short our whole civilization depends upon coal. That's why I call coal 'king.' If there ever was a monarch in this world whose authority could not be questioned without destruction to those revolting against it, that monarch is 'Old King Coal.'"

"But if we had no coal, why couldn't we do all these things with wood?" asked Jim.

"First, because we haven't enough wood," answered the Doctor. "We are using up our supply of wood much too rapidly already, and there coal is rendering us another important service. It is enabling us to use iron and steel for building materials, and a thousand other purposes for which we once used wood, and thus to spare our wood."

"What is your 'secondly,' Doctor?" asked Ed.

"Why secondly, wood cannot do the work."

"Why not?"

"Because it hasn't enough sunshine in it."

"How do you mean?"

"Why you know, don't you, that all the heat we get out of burning fuel of any kind, is simply so much sunshine stored up for us and released by burning?"

"I confess I didn't know that," said Tom. "Or at any rate I never thought of it. Now that I do think of it, I see how it is with wood. But what has sunshine to do with coal, buried as it is deep under rocks and earth?"

"Then you don't know what coal is, and where it comes from?" asked the Doctor. "Let me explain. There was a period in the world's remote history when the earth was much warmer than it is now—almost hot in fact. The atmosphere was filled with the gases of carbon, and the rains were an almost continuous cataclysm. Human life was impossible in these conditions. No man could have breathed such an atmosphere and lived. But the conditions were peculiarly favorable to abundant vegetable life. There were forests such as we do not dream of now even in tropical swamps. Ferns grew to the height of great trees, vines and cane and grass and air plants filled up every available inch of space, and they all grew in that car-

bonized atmosphere with a rapidity and luxuriance quite impossible now. All this vegetation died of course and fell to the ground as all vegetation does and has done from the beginning of time. Wherever it fell into water and was thus shielded from the air, and wherever it managed to get itself covered with earth or rock, as in that highly disturbed volcanic age often happened, it was converted into coal by pressure and by losing certain of its volatile elements, just as charcoal is made by expelling the volatile parts from wood. So, without going any further into details, you see that the coal is preserved vegetation which grew many thousands of years ago, and that the heat we get from it is simply the sunshine it stored up at a period before ever human life existed. What a pity it is that we have to waste so much of it!"

"How do you mean, Doctor?" asked Jack.

"Why you see we waste almost all the heat that coal gives us. If we could make effective use of it all, the burning of a single pound of coal would give us force enough to lift more than eleven and a half millions of pounds a foot from the earth; but the most that we actually get out of it is force enough to lift one and a half million pounds."

"What? All that from one pound of coal?" asked Jim.

"Yes, all that, and it all means so much sunshine which fell upon the earth thousands of years ago. Curious, isn't it?"

"It's simply astounding," said Jack. "But why do we burn coal so wastefully, Doctor? Why can't we utilize more of its heat? And what becomes of the waste heat?"

"Our methods are imperfect," answered the Doctor. "In a big manufacturing city thousands of tons of coal, or what is essentially the same thing, go off into the air every day in the shape of black smoke. You see the blackness of smoke is nothing but pure carbon or in other words coal. Then again think of the heat that goes up every smoke stack and is wasted in the air. It would run hundreds of great engines if it could be turned to account. And there is all the heat that makes an engine room so horribly torrid. Every bit of that is wasted power. Little by little, however, we are learning to save the power that coal gives us. A high pressure engine, like an ordinary locomotive, besides wasting coal, wastes greatly more than half the expansive force of its steam. It uses the steam only once and that very imperfectly, and then lets it escape into the open air and go to waste. But the big steamships and many factories have what they call triple or quadruple expansion engines which use the same steam three

or four times in propelling the machinery, and then condense it into hot water and send it back into the boiler, thus saving a vast deal of the heat that would otherwise be wasted. Still even they waste most of the heat that their coal produces."

"By the way, Doctor," interrupted Tom, "how much coal does it take to drive one of the big steamers across the Atlantic?"

"From fifteen hundred to three thousand tons," answered the Doctor, "and think what a waste that is when a few hundred tons give force enough to do the work if only the force developed could all be used."

"But how do they manage to carry any freight when they must carry such an enormous load of coal?" asked Ed.

"That is another serious waste," answered the Doctor. "For every ton of coal carried means one ton less of freight. And then, too, think of the expense incurred in putting all that coal aboard. And think too of the cost of feeding and paying wages to a large company of men to handle it after it is on board! For you know besides the stokers who shovel the coal into the furnaces, there are the 'coal trimmers' as they are called, whose duty it is to keep the coal heap properly distributed in the ship. You see a ship is not stiff and rigid like a coal pocket. It would never do to

begin at one end of a coal heap and use it as it comes. That would presently leave one part of the ship with no coal load at all, while thousands of tons would burden other parts. No ship that ever was built could stand that. It would twist her out of shape, warp her seams open and send her to Davy Jones in a very little time. So from the moment the stokers begin to shovel coal into the furnaces under a steamship's boilers the coal trimmers and coal carriers must busy themselves with the night and day work of so shifting the coal as to keep its weight properly distributed. But now to come back to what I was saying. Little by little we are learning to save some small part of the enormous waste in the burning of coal. One example will illustrate. In smelting iron—that is melting it out of the ore and separating it from the rock stuff,—the waste twenty-five years ago was simply appalling. The furnaces were mere pots built of fire clay brick, and filled with coal or coke beneath and iron ore on top. A blast of steam or hot air was sent into them from below to make the fire burn as hotly as possible. Sometimes this blast was strong enough to blow bushels of unburned coal or coke out at the top. That however was a mere trifle as compared with the other waste. For great flames, nearly hot enough to melt iron, poured out of every furnace top and

were lost in the air. Every bit of that heat represented power that was literally cast to the winds. All that has been greatly improved since. The flames and heat that escape from the blast furnaces are now very generally harnessed and made to do further work. They are used to heat great steam boilers and thus create the power that operates rolling mills and gigantic forges, and vast machine shops. But we still waste very much more than half the heat that coal gives us—often more than nine-tenths of it."

"But, Doctor," said Tom, "If we go on wasting our coal at such a rate, won't we use it all up presently? And will not civilization have to stop then?"

"There are three answers to that," replied the Doctor: "1st. That we shall more and more learn to economize in this matter of heat wasting;

"2nd. That our coal supply in this country seems to be sufficient to last for millions of years yet; and

"3rd. That long before it is exhausted the ingenuity of man will probably discover means of securing power from some other source than coal."

"What, for example?"

"Well, perhaps we shall learn how to utilize terrestrial magnetism directly. You know this

earth of ours is a gigantic magnet, and magnetism is the raw material of electricity, if I may so express it. At present we get all the electricity we use out of the earth, but we have to do it by burning coal to run dynamos. Perhaps we shall find ways to save that expense by drawing the electricity directly from the earth. We have already done something closely resembling that, with the result of a great saving."

"How was that?"

"Why when the telegraph was first invented it was necessary to double the wire lines, putting up two wires every time by way of completing the circuit. You know electrical energy will not manifest itself, or as we say, the electric current will not flow, unless there is a circuit established. Well at first they established the circuit by running two parallel wires, one to carry the current one way and the other to bring it back. That's a clumsy way to put it, but it will answer my purpose in explanation. After a while somebody found out that the earth is a better conductor of electricity than any wire could be, and so the circuit was established simply by running each end of a single wire into the ground, making the earth do the work formerly done by the other wire. That simple discovery saved exactly one half the expense of telegraph companies for wires."

By this time it was growing late and as the boys had a hard morrow's work before them the Doctor ceased talking and all went to their bunks.

CHAPTER XLII

In the Service of the King

VERY early the next morning the boys, who had caught the Doctor's enthusiasm, began again their task of digging through the "out crop" coal, which began now to grow softer and more workable, while the coal itself grew steadily better in quality.

But about noon, when they had pushed their little shaft about a dozen feet into the hill, the Doctor ordered a cessation of the digging.

"We must put in some supports for our roof," he said, "or we shall presently be caught in a cave in."

"How are we to do it?" asked Jack.

"Well, I am not a mining engineer," answered the Doctor, "but I've seen enough of the work to know how to protect a little shaft like this, anyhow. The engineers, when they come, will of course tear out all that we do, because they must drive a big shaft into the hill, while all we want to do is to push a little gallery three or four feet wide far enough in to find the best of the coal.

But even in doing that we must securely support the roof of our mine. So we'll cut some timber and put it in place. Jack, I wish you would choose the trees to be cut."

"All right!" said Jack. "What dimensions are required?"

"First of all," answered the Doctor, "we want from six to ten pieces of oak, say four feet six inches long and fully twelve inches in diameter. They will serve for roof timbers, and will be enough to carry us thirty or forty feet further. Then for perpendicular supports—one at each end of each timber—we shall need just twice as many perfectly straight oaken sticks eight or nine inches in diameter."

"But why do you want big sticks to go crossways and comparatively little ones for the perpendicular supports?" asked Ed. "The perpendicular timbers must after all bear the weight."

"Oh, that's simple enough," said Tom, whose perceptive faculties were always alert. "You see a stick set up on end, if it is perfectly straight and set true, will bear vastly more weight than a stick of twice or three times its thickness, if laid crossways. In fact a straight eight-inch stick nine feet long, if set on end will support nearly as much as another stick nine feet thick—if there were any sticks that thick—laid lengthwise."

"That's it," said the Doctor. "We want heavy timbers across the top, supported by stout eight or nine inch sticks set endwise under them. Now, Jack, select the best trees and we'll all get to work as soon as dinner is over. We'll get the dinner ready while you choose the timber to be cut."

The cutting of the timber was a small task to expert young wood choppers; but it was a very difficult task for the six boys to bring the timbers to the mine and set them in place. True, only two frames had to be set up for the present, but the cross pieces, short as they were, were enormously heavy, and it required all the ingenuity as well as all the strength the boys could command, to get these two frames up, each consisting of one cross piece under the roof and two uprights supporting it.

When night came only one of the two frames was in place, and it was obvious, as Jack said, that "another half day must be wasted on such work" before they could begin mining again. But that evening the Doctor dug two bushels of coal out of the farthest end of the shaft, built a special fire, placed the coal on it, and carefully covered it with earth.

"What are you doing, Doctor?" asked his crony, Tom.

"I'm making a coke oven, Tom," he replied. "I want to see how our coal will coke."

"But I don't understand about coke," answered Tom. "Why is it that when you burn most of the substance out of coal it will make a hotter fire than with all its combustible materials in it?"

"That isn't quite the case, Tom," answered the Doctor. "What we do in making coke is chiefly to expel the gas from the coal and to roast out the sulphur, which seriously interferes with the making of sufficient heat to smelt iron. Some coal gets burnt up in the process; some makes an indifferent and nearly worthless coke; while some makes a coke that would melt the heart of a miser. Now, as I told you the other night, I am convinced as a geologist, that a little further in our mine we shall come to coal so free from sulphur that we can smelt iron with it without making coke of it at all. But it is always preferable to make coke of it, and so I'm trying to see what sort of coke our coal will make. Of course we haven't come to the real coal yet, but I can tell a good deal by what we have now. We'll let my little coke oven roast all night and in the morning I'll know a great deal more than I do now. But if you have any question in your mind as to the gas making capacity of this coal, I'll remove it at once."

With that he went to the camp fire, seized a blazing brand and applied it to the little mound of earth under which he had buried his coal. Instantly the whole outside of the mound was aflame.

"That's the gas," said the doctor. "You see there's plenty of it, even in the imperfect coal that we've reached. It will burn out presently and meantime its heat will help roast my coal into coke."

After supper the boys again plied the doctor with questions concerning coal. Tom began it by saying:

"You told us the other evening, Doctor, that the value of a bed of coal depends upon many things besides its location and its accessibility to market. What are those things?"

"Thickness, for one thing," answered the doctor, "and that is a point in which our mine excels. You see coal seams are of every thickness, from that of a knife blade to beds 100 feet through. Those last are very rare, however. In this country the seams vary from knife blade thickness to about nine or ten feet. Now, in working a coal mine the men, of course, must have room to stand up in the shaft, so that wherever the vein is less than six feet thick a good deal of rock or earth must be removed so as to give

sufficient height to the mine. It costs as much to remove the rock or earth as to handle a like amount of coal, and the stuff is worthless. So you see it is greatly more profitable to work a thick than a thin vein. Indeed there are very few veins under three or four feet thick that it pays to work at all. Our deposit here appears to be about nine feet thick, and that means much to us.

"Another condition of value in a coal mine is a good roof. There are many rich veins of coal that have only earth or soft shale above them, and they are practically worthless because they are unworkable. We fortunately have a superb rock roof over our mine."

"But, Doctor," said Tom, "you told us the other night that coal is at the basis of modern industrial civilization. Then I suppose that those nations which have coal must be the foremost ones in industry and consequently in civilization."

"Certainly they are," said the doctor, as the other boys gathered about to hear the talk; "and they will be more and more so as time goes on. England has more coal than any other country in Europe and so England is by all odds the foremost industrial nation in Europe, though other nations there have the advantage of buying English coal in an open market. Ever since our mod-

ern age of industry and machinery set in—that is to say ever since Old King Coal came to his throne—England has grown greater and richer, till now she is by all odds the richest country in Europe."

"Haven't the other countries there any coal?" asked Ed.

"Yes, but comparatively little. Let me see if I can remember the figures approximately. Great Britain's coal fields cover nearly 12,000 square miles; France has only 2,000 square miles, Prussia about the same, Belgium has only 500 square miles, Austria less than 2,000; Italy none at all to speak of, and as for Spain, the Spanish indolence, which puts off everything till 'to-morrow' has prevented that country from even finding out what coal she has. Russia has vast fields and bids fair to take her place ultimately among the great coal producing and industrial nations of the earth. But as yet her coal fields are imperfectly developed and her coal production is only about one-thirty-fifth as great as that of Great Britain."

"What about the United States, Doctor?" asked Tom, who was an aggressive patriot.

"Well, we have many times more coal than all Europe combined," answered the doctor. "Great Britain's 12,000 square miles of coal lands sink into insignificance in comparison with our 214,-

000 square miles of measured coal fields, our 200,000 or 300,000 square miles in the Rocky Mountain states, and our totally unguessed-at coal fields in Oregon and Washington. As four or five hundred thousand and probably more, is to twelve thousand, so is our known coal area to that which has made Great Britain the greatest industrial nation on earth next to our own. And some of the British mines are pretty nearly worked out, while we have scarcely scratched the surface of ours."

"Then this is likely to become the greatest industrial nation on earth?" said Jack.

"It is already that," answered the doctor. "We are selling our manufactured goods—even iron and steel products—in England to-day, almost as freely as we are selling our grain and our meat. I tell you, boys, there is nothing in this world that can happen to a man that is so good as being born an American citizen."

"Amen!" said Tom. "To employ the dialect of my friends among the mountaineers, 'them's my sentiments every time all over and clear through.'"

"All right," said Jack, "now let's get to bed."

"I suppose there's a lot more you could tell us about coal, Doctor," said Jim, "if there was time."

"Of course there is," the doctor responded; "but you'll learn it all practically. For we've a great mine here, and you boys will have first choice of places in its management."

With that they all went to bed.

CHAPTER XLIII

The Camp Venture Mining Company

THE next morning the doctor "drew" his coke oven, which was quite cool by that time. He minutely examined the coke and called Tom to look at it. "You see," he said, "how perfectly it is fused. You see how free it is from any sort of admixture of sand or anything else. I tell you, Tom, we've got a great mine here, and it is going to make all of us comfortable for the rest of our lives. Your good mother is especially to be congratulated. This find will make her not only independent, but really rich. Now I want you to understand me, Tom. If your mother prefers to have anybody else manage this affair for her, I will instantly withdraw. At present I have no interest whatever here, and I can have none except by her consent. This mine is absolutely hers, to do with as she pleases. I want to serve her in the matter, by finding among my friends the capitalists who can make the thing 'go.' If she prefers to put the

matter into other hands, I hope, Tom, you'll urge her to do so."

Tom arose, took the doctor's hand, pressed it warmly, and said simply:

"I'm not quite an idiot, Doctor. Go on with your plans."

Somehow, although Jack was Tom's elder brother, the doctor and indeed the whole company had learned to think of Tom as essentially the head of his family. Curiously enough his mother and the other boys themselves had learned to regard Tom in precisely the same way.

"But Doctor," said Tom, eager to divert the conversation, "why were you in such a hurry to put out the fire here that night when we first discovered the coal? Would it have burned any considerable way into the vein?"

"I can best answer you, Tom, by telling you that about fifteen or twenty miles back of Mauch Chunk, in Pennsylvania, there is a bed of coal that has been burning for about half a century. Everything that human ingenuity could do to put it out has been done, but all to no avail. The whole mountain is slowly burning away, and when one walks about on the crust he is liable at any moment to have a foot sink into the fire below. So you see why I didn't want our mine to begin its career by getting afire."

The next thing on the day's program was work upon the second truss for supporting the mine roof, and this was got into place before midday, so that the afternoon was given to vigorous digging into the coal bank. About five o'clock the Doctor called out:

"You needn't dig any further, boys, we've got it safe enough!" Then he began singing "Old King Coal," as he hugged some specimens of the coal he had dug out of the extreme end of their little shaft to his bosom.

"Got what?" asked Tom, who watched the Doctor's antics with eager interest.

"Why, we've got what we've been looking for, coal equal to the very best that was ever mined in Virginia or West Virginia. I was sure I could not be mistaken. Now I KNOW." And with that the Doctor danced and sang again.

"Now," he said, "you boys come here. I want to talk with you. I'm going down to the station to-morrow to see my father. I propose, if you approve the plan, to have him come up here to inspect our find. Then I'm going to get him and my brothers and their financial associates to make a plan for capitalizing and working the mine. When their plan is made, you, Tom, and I will go to your mother and see what she thinks of it. You see the mine

belongs to her absolutely, and any interest that any of the rest of us get in it we must buy from her. But, by way of preparing for such a purchase, I'm going down to the contractor's camp to-morrow, to get my father to come up here with a mining expert and an engineer, to look at the property and make up their minds about it."

The suggestion was welcomed by the three boys concerned, and so the Doctor made his preparations for an early departure in the morning.

The distance was not over two or three miles, and, as the Doctor had no wagon road to look out for, it took him less than an hour and a half to reach his father's headquarters. Early in the afternoon a cavalcade reached the camp. It consisted of the Doctor, his father, one of his brothers, a mining expert and two engineers.

They went at once to work to inspect the mine and its roof and every thing else connected with it or in any way affecting its practical working. Finally they made their reports quietly to the elder Latrobe, and that gentleman bade them mount their mules and return to the contractor's camp.

Then he asked the Doctor to bring the Ridsdale boys into conference with him. Seated on a log, he explained the situation thus:

"Your mother has a very valuable coal mine here, in a most favorable locality. It will need capital, of course, for its development, and that I am prepared to furnish, as the representative of myself, my sons, and my other financial associates. My proposal is this: that we capitalize the mine at $400,000; that is to say, that we organize a company with that amount of stock; that your mother shall put in the mine as $200,000, and receive stock to that amount; that I and my associates—I will take care of that—shall put in $200,000 in cash and take the remaining stock in payment for our contribution."

"I don't see," said Tom, "but that your proposal is a just and generous one. As I understand it, my mother is to put the mine into the company, as $200,000 capital, and you gentlemen are to put in $200,000 in money to be used as working capital, in operating the mine; my mother is to own one half the shares and you gentlemen the other half."

"That is quite correct," said the elder Latrobe.

"Then I am perfectly satisfied," answered Tom. "What do you say, Jack? What's your view, Harry?"

The two other boys had no objection to offer. Indeed the easy rolling of large figures as sweet

morsels under the tongues of the financiers completely appalled them, and so the whole matter was left to Tom to settle.

That evening he went down the mountain with the elder Latrobe, leaving the Doctor and the boys to guard the mine. The next day Mr. Latrobe and Tom set off on mules for the town, fifteen miles distant, where Tom's mother lived. They arrived about noon, and Tom was eager to broach the business at once. But Mr. Latrobe objected.

"I don't want to talk to you about this business, Madam, without the presence of some legal adviser or man of business, whose advice will prevent you from making mistakes."

"Oh," answered the widow, "my Tom is here and he has a clear head."

"All the same I wish you would send for a lawyer," answered the gentleman.

"But I cannot afford it," said the lady.

"You can, Madam. Your coal property is rich enough to afford many lawyers. And besides, Tom here has money enough to his credit on our books to pay a lawyer's fee ten times over. You have no idea what a winter's work your boys have put in on the mountain. Sincerely, I do not wish to lay my proposals before you without the presence of some disinterested, professional person,

who can wisely advise you as to their acceptance or rejection. I have asked Tom to come with me in order that he may tell you how rich a property you have in this coal deposit, and warn your professional adviser against concluding any arrangement with me and my associates which does not give you an adequate recompense for the property that we ask you to put into this venture."

So the lady sent for a wise old lawyer, who, after hearing Tom's statement, earnestly advised the widow to accept the terms offered. Then Mr. Latrobe said:

"Madam, I am going to employ this gentleman, as a trusted friend of yours, to draw up our articles of incorporation and complete the legal formalities necessary to our mining company's existence. Meantime Tom and I will go back to the mine and set men at work in its development."

"What name will you give to your company?" asked the old lawyer.

"Why, the 'Camp Venture Mining Company,'" quickly responded Tom, "and we'll call the mine itself the 'Camp Venture Mine.' It all came out of Camp Venture."

CHAPTER XLIV

Little Tom at the End of it All

ALL arrangements having been agreed upon between Mrs. Ridsdale and Mr. Latrobe, it was not necessary to wait for the formal organization of the company before beginning the work of developing Camp Venture mine. So Tom and Mr. Latrobe, as soon as the preliminary papers were drawn up and signed, mounted their mules and returned to the mine. Tom reached the camp that night and told the boys all about the arrangements that had been made. The next morning Mr. Latrobe came up the mountain, accompanied by a mining engineer, a company of workmen and a wagon load of tools, the latter guided by the same deaf and silent driver who had brought up Tom's load of supplies.

The men were set to work at once under direction of the engineer. They cleared away the forest in front of the mine and, in the course of a few days built a chute so nicely calculated as to

its incline that it would carry coal gently but surely to the railroad below.

Meantime another company of workmen were busy constructing long sidetracks at the foot of the hill and connecting them with the main line of the railroad, while still another gang was employed in making a good wagon road down the hill.

The boys, seeing their work done, began to prepare for their home-going—all but Tom and the Doctor. Those two sat on a log just within the light of the camp fire one night and talked.

"I am going to stay here," said the Doctor. "This climate agrees with me as no other ever did, and besides, I shall be needed here. We shall have half a thousand miners at work here within three months, and their families will occupy quite a little town, built upon this ledge. A physician and surgeon will be needed, and I have secured the appointment. The company will pay me a salary for treating all injuries that the miners may receive, and as for the rest, of course the miners themselves will pay for my services in their families. Anyhow I'm going to build myself a comfortable little house up here and live here, where I can be strong and well and happy."

"I'm going to stay too," said Tom. "I'm going in as a miner if I can't get anything better to do."

"But you can get something much better," said the Doctor, "and I was just about to speak of that. I have already talked to the chief engineer about it. He introduced the subject himself. He is a person of very quick perceptions, as every engineer must be if he hopes for success, and he has discovered certain qualities in you which commend you to him very strongly. He has found out that, as you once put it, you 'look straight at things and use common sense.' Apart from a little technical mathematics, that is absolutely all there is of engineering, and he has taken a fancy to have you for an executive assistant. You see, in starting a mine so great as this, he will be obliged to plan many things which he will have no time to supervise in the execution. He wants you as an 'engineer's overseer,' he calls it. That is to say, when he plans a truss or a support, or anything else that is necessary and explains it to you, he wants to leave the matter in your hands, leaving you to direct the workmen and to see to it that his plans are intelligently carried out. After his talk with me concerning you, he was certain that you are precisely the kind of assistant he wants, and the appointment is open to you at a very fair salary."

"How can I ever thank you enough, Doctor?"

said Tom, with tears in his voice. As for his eyes they could not be seen in the darkness.

"By not thanking me at all. Don't you understand, Tom, that my father, my brothers and myself have invested heavily in this mining venture? I have put into it every spare dollar I had in the world, and naturally I want it to 'go.' I believe that your practical common sense can mightily help in accomplishing that, and for that reason I have encouraged the chief engineer in his purpose to make you his overseer."

"Thank you, Doctor," said Tom. "But if you know me at all you know I'm honest. I made up my mind to stay here on any terms that I could make, because I want to study this thing that you call mine engineering. I wanted to see how it is done, so that some day I could do it myself. I don't intend to remain an engineer's overseer all my life. I intend to be the best engineer I can make out of the raw material in me. So my plan is to stay here, keep my eyes and my mind open, and learn all I can of practical engineering work, till the mine begins to pay. Then I intend to go away to some scientific school and take a regular course in engineering."

"That's admirable!" said the Doctor, with enthusiasm. "Now, I'll venture some suggestions. How much mathematics do you know?"

"Algebra, elementary and higher, and a little geometry."

"Good!" exclaimed the Doctor. "Now, I propose this plan: You shall live with me in the little house that I'm going to build, and serve as the chief engineer's executive at a fair salary from the company. I'll teach you all I know of general chemistry and geology of evenings, and I'll interest the chief engineer to teach you trigonometry, the calculus and surveying. In the meantime you'll be learning the practical part of engineering in your daily work, and when you go off to that scientific school its faculty will have little to do except to take your fees, record your name, and grant you your diploma."

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Six years later Camp Venture mine was, in the phrase of the investors, "one of the richest paying enterprises" in that part of the country. Dr. Latrobe had become president of the company after the death of his father, and the enterprise owed much of its success, as every body agreed, to the skill, the energy, and the wonderful common sense of its chief engineer, Thomas Ridsdale, Esq., graduate of a noted school of mines.

Tom was only twenty-four years old then, but

he had always been accounted "old for his age," and as he stood upon the bluff, contemplated the long line of cars loaded with the product of Camp Venture mine and planned new side tracks in order that cars enough might stand there to receive the other waiting cargoes of the concentrated sunshine of thousands of years ago, "Little Tom," grown now to six feet two inches in his stockings, was satisfied with his life and his work.